

MODERN PIANO PEDAGOGY



FRANK J. POTAMKIN

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MODERN PIANO PEDAGOGY

ITS SCOPE

BY

FRANK J. POTAMKIN

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IN MEMORY OF MY
TEACHER AND FRIEND
D. HENDRIK EZERMAN

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FRANK J. POTAMKIN.

AUTHOR'S FOREWORD

The goal of the piano teacher should not be to turn out an immense flock of virtuosi. This, in the first place, is an impossibility. In the second place, the average pupil does not especially desire virtuosity.

What he does want is to gain an understanding of music adequate for his needs. He wants to be able to perform from notes and from memory as well as instruction will enable him to, in a short time and with minimum effort.

In the past even a fair degree of success was rarely achieved by the average child. By far the greatest number of pupils gave up their studies before they were able to play well.

Today a competently-trained and sufficiently well-informed teacher can promise the beginner more than a fair degree of success. This teacher can, at the outset, assure a pupil that he will be able, if he co-operates, to gain the skill and the information he desires, in a short time (indefinite, of course), and with minimum effort.

However, even today the competently-trained and sufficiently well-informed teacher is still too scarce. And even today when a pupil changes teachers, his

new one is apt to find some of the following deficiencies in the pupil:

1. Careless music-reading. (This may be due to insufficient information or improper eye-training.)

2. Unreliable, inefficient (untrained) memory-work.

3. Insufficient ear-training.

4. The use of an incorrect style of tone-production leading to a

5. Poor physical condition of the performer's own playing apparatus, and with it a

6. Lack of technical resourcefulness in spite of the general use of technical materials such as Hanon, scales, etc.

7. Completely undirected use of the pedals.

8. The employment of a practice scheme which delays the process of learning, which in turn produces a state of weariness and disappointment.

It is entirely regrettable that such deficiencies should be so common. The teacher must become more interested in the science of music teaching. Among the most important sciences applicable to the study of music at the piano are: physics (the laws of the piano as a machine); physiology (facts about the human body applicable to piano playing); psychology (as applied to the study of memory and musical talent); and pedagogy (the principles of good teaching applied to piano teaching).

It was with these things in mind that this book

was designed and written. It is hoped that it may serve as a text for normal school instructors, teachers in general, and for advanced students, particularly those working alone. It is especially hoped that the teacher, who is already endowed by nature with some capacity in his chosen field, will receive definite and helpful information concerning the various problems of the music studio. It is also hoped that parents may find this book interesting and useful as a guide.

FRANK J. POTAMKIN.

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Part I:
MUSICAL MEMORY

CHAPTER I

GENERAL REMARKS ON MEMORY

INTRODUCTION.

In the process of higher learning there is the element of consciousness. This consciousness is not a thing, but a procedure, and the most essential part of this procedure is the function of memory. Memory is actually the basis of all learning. There can be no learning without it. The extent of one's ability to learn is directly related to the power of one's memory—to the degree of its development. And it is a consolation to know at the start that no mental function can be more greatly developed than that of memory. (However, it is not maintained here that mental growth is secured by merely strengthening the memory. To secure mental growth, memory training must be accompanied by the working out of actual problems with increasing understanding and skill.)

The foregoing observations are so well grounded on basic rules of psychology that the failure of most piano teachers to apply them in their teaching is almost incomprehensible. They do not seem to possess a proper concept of memory in its relation to

learning, and, therefore, do not attempt its systematic development. Memory to them is incidental rather than fundamental.

The practical goal of this treatise on musical memory is the discovery of the most efficient procedure for the memorization of music, a procedure which will not only accomplish the immediate task at hand, the memorization of a particular composition, but which will also tend to develop the memory itself to the greatest extent in the quickest time. The aim of this procedure is great efficiency and economy in learning. This procedure does not deal with the order in which problems should be solved. Mental growth is neither orderly nor logical, and problems are best studied in the order in which they chance to appear most significant.

IMPORTANCE OF GIVING THE PUPIL A GOOD PROCEDURE.

It should be apparent to all that the discovery of a good procedure for memorizing cannot be left to the devices of the pupil himself. The importance of passing on to the pupil a good procedure is stated as follows by E. Meumann:¹ "Even at an early age the pupil is called upon to accomplish a great variety of mental tasks; and we require of him a work of memory to which he brings little, if any, experience. Now, mental work may be done by wholly different meth-

¹ *The Psychology of Learning*: Appleton-Century.

ods. . . . Which of these methods of learning leads most readily and most rapidly to the goal,—to fluent and errorless reproduction? Which method secures the most permanent and the most accurate retention? Questions such as these arise in connection with every sort of memorial imprinting. . . . Thus in every department of memorial function we may speak of a technique and economy of memory.”

WHAT IS MEMORY?

Memory may be defined as the ability to receive, to retain, and to subsequently recall impressions without the aid of the original stimuli which are no longer present.

“In every-day speech, memory is understood to mean the capacity to imprint and to retain perceptions and ideas, and, as it were, to incorporate them into consciousness as a temporary or permanent possession. . . . Now since reproduction must necessarily depend, in some sense, upon a retention of impressions, and since our modified acquisition must be due to an after-effect of former contents of consciousness, memory may be briefly defined . . . as the capacity to retain perceptions or ideas and subsequently to revive them or at least to experience after-effects of their former presence in consciousness. And since it seems probable that an ‘after-effect’ is only a species of reproduction, the present consequences of former memorial activity may all

be referred to briefly as reproduction.” (Meumann.)

MEMORIES CLASSIFIED.

Some writers on the subject of memory try to distinguish between general memory and special memory. Actually, there is no general memory, but a great number of special memories. The idea of a general memory probably originated from the fact that when one special memory is developed, many other special memories, closely related to the one being developed, also improve.

Memories classified according to the kind of subject-matter to be retained fall into the following groupings: “a. The sense-memories. . . . b. Memory for spatial and temporal impressions. . . . c. Memory for concrete objects and processes as wholes, for things and events in the external world. . . . d. Memory for abstract signs and symbols, for names, numbers, and abstract verbal meanings; and e. Memory for our own mental life and its processes.” (Meumann.)

A simpler classification of the many special memories puts them into two groups. In the first group are the sensory memories, special memories which concern themselves with sensations, ideas and thoughts. In the second group are motor memories—memories of muscular movement.

Concerning the relationship existing between motor and sensory memories, Stephen Sheldon Col-

vin writes:¹ “. . . The sensory experience demands for its completion an adjustment to some object connected with this experience, and, therefore, sensation can never be taken as something in itself. . . . Sensory experience is never merely sensory, but motor as well.”

Concerning this same relationship, Meumann says: “It need not be mentioned that motor processes leave traces or dispositions in nerve and muscle just as do the sensory processes. . . . All of the laws of association and reproduction as well as the conditions of memory in general, are probably quite as valid for motor as for intellectual processes; and hence we may speak of motor memory and of motor reproduction. A familiar illustration is the practiced pianist. . . .”

MEMORY TYPES CLASSIFIED.

There are three distinct primary memory types: visual, auditory and motor. There are, of course, many variations of these types, and many combinations of these variations. The most important combination, important enough to warrant separate discussion as a fourth memory type, is the auditory-motor type.

The visual type depends mostly upon a picture, that is, a mental picture, of the memorial material. The auditory type, however, transfers impressions

¹ *The Learning Process*: Macmillan.

as often as possible into spoken words, and retains them better that way. When motor memory accompanies this auditory type with sufficient strength we have the auditory-motor type. This type transfers the impressions into a series of vocal images of spoken words, which are accompanied by strong sensations of movement. These impressions are, likewise, retained better by the auditory-motor type than are, for instance, visual impressions. In the main, auditory-motor memory is the memory for inner-thoughts, that is, for unspoken words. The motor type is best illustrated by the athlete who acquires skill by means of muscular retention almost entirely.

Regardless of the kind of material to be learned similar transfers are made. It is natural for a memory type to depend as much as possible upon his strongest memory sense.

"Experiments seem to show that there is a good deal of difference in the vividness of these various memories and the ease with which they arise; and further that there are periods in the development of the individual when certain types of memory are more important than others. . . . Further, the various kinds of memory show marked fluctuations from time to time, with periods of rapid development, and others where there is no progress at all, and even perhaps a retrogression. Experiments seem to show that there is a general falling off in the various kinds of memory, with the exception of the verbal-visual,

at the onset of puberty. . . . Meumann says that the fourteenth and fifteenth years of the child's life seem to be unfavorable (for all kinds of memory." (Colvin.)

A point where development ceases for a considerable length of time is called a "plateau". The entire learning process may be affected by a plateau, or just a part of it may be thus affected. The plateau must be understood by the piano teacher so that he does not discourage a pupil experiencing one. Some psychologists claim these plateaus are necessary stages in any learning curve; others claim they are not, that they can and should be avoided. However, the fact remains that, in spite of the teacher's efforts, most pupils will probably experience one. The main point to remember is not to allow it to extend over too great a length of time, or the result will be a severe break in the learning process.

CHAPTER II

ANALYSIS OF MUSICAL MEMORY AUDITORY MEMORY

WHAT IS MUSICAL MEMORY?

The term “musical memory” is used to denote collectively the special memories employed in the study of music—its literature and its performance. It is possible to continue to divide progressively each of these special memories into two or more still more highly specialized memories. However, the needs of this treatise are adequately served by a discussion of the primary special memories.

Frederick G. Shinn defines musical memory as¹ “. . . the particular power by which we retain and can recall at pleasure a series of musical sounds when presented to us either singly as in a melody or in combinations as in a progression of harmonies. . . . The degree to which this power is possessed by any individual, depends upon the sensibility of the ear, *First*, with regard to the susceptibility of the ear to general sound-sensations, the excitement so caused producing a concentration of mental and nervous

¹ *Musical Memory*: The Vincent Music Co., Ltd.

force; and *Secondly*, with regard to its special power of discriminating the differences of musical pitch, so that it may readily perceive the difference between various melodies or various harmonies that are presented to it."

Shinn's description does not cover all of the phases of musical memory; it is in reality a description of auditory memory. A complete description should account for the memories of the eye, the muscles, and the intellect (visual, motor, and auditory-motor) also.

Musical memory is perhaps best defined as the sum of one's abilities to attend, retain, and reproduce musical tones by ear (referring to the pitches of tones singly or in groups and their intensities and durations); by eye (referring to the printed music, and to keyboard location); by muscle (referring to the memory for movement); and by one's thought processes (ideas and unspoken words).

WHO POSSESSES MUSICAL MEMORY?

Every normal person possesses musical memory in some degree. According to Dr. Carl E. Seashore, the normal mind is musical to the extent it is normal.

Every listener at a musicale employs musical memory. Without this function the listener could enjoy the music that is being presented to him but momentarily. Musical memory enables one to retain a theme and to recognize its recurrence, thus en-

abling one to follow certain developments throughout a composition. Only by virtue of musical memory does the form and structure of a composition become evident.

Any child who sings, whistles, or hums even the simplest of nursery tunes demonstrates thereby that there is some development of his musical memory. In this case it is mostly auditory memory that is functioning. This child may be but two or three years old. However, although very early training is distinctly desirable, short of senility, one is never too old for the training of one's musical memory. And an important point for the teacher to bear in mind is: no matter to what extent musical memory is possessed it can be greatly improved, probably several fold or more. It is doubtful if anyone ever developed his memory to the greatest extent possible.

AUDITORY MEMORY.

The most important special memory employed in piano playing is auditory memory, commonly termed "ear memory". It is the most "musical" of the memories. That is probably why Shinn refers to that form of memory as "musical memory".

Auditory memory is the memory for music as it is heard, for musical tones heard singly as in melodies, or in groups as in a harmony or a succession of harmonies. The sensory organ involved is the ear, which is the pitch and intensity discriminator. However, no form of memory functions without the support

of motor memory. It has already been stated that every sensory experience has its motor accompaniment.

Auditory memory enables one to reproduce music by recalling its sound—its pitch, intensity, duration and quality. Whether the written or printed music has been seen or not is unimportant, so long as the recall is based almost entirely upon the recollection of its sound.

Auditory memory is of great importance in the performance of any composition, but the simpler the piece, the more may one rely upon this form of memory. More difficult music will require considerable assistance from the other special musical memories, especially auditory-motor memory.

One should never play without the "ear". However, when one relies almost totally upon a recollection of the sound, then there is the colloquial "playing by ear".

PLAYING BY EAR.

The ability to play by ear depends upon two things: (1) a good ear—one that recognizes and remembers pitches and their differences (intervals), and (2) a strong correlation between the ear (the pitch discriminator) and the key. The tone, which has been heard and stored in the memory, is heard again imaginatively (auditory imagery), and the performer is almost automatically guided to the proper location on the keyboard (motor imagery).

The ability to play by ear is very obviously an indication of musical talent. Its practice should not be discouraged. This ability is the result of a highly developed form of imaginative memory.

It is, of course, necessary to understand when playing by ear is permissible and when it is not. It should never be relied upon entirely when playing a carefully composed selection, especially a rather difficult one. Alterations, even very slight ones, are usually objectionable. When the ability to play by ear is accompanied by careful study of the score, an excellent performance should result. When a composition is extremely simple, a performance by ear may do it full justice.

The ability to improvise demands the ability to play by ear, and improvisation can be a wonderful art when this activity is being performed by an extremely talented person.

In the field of popular music, playing by ear is very frequently indulged in. The average jazz piece is often improved by such rendition. This, of course, depends upon the degree to which the ability to play by ear is possessed by the performer. This ability varies in degree as greatly as do all other mental functions.

PITCH.

Auditory memory depends upon the primary sense of pitch. When we say that auditory memory is the memory of the ear we mean the ear contains the

pitch-discriminating mechanism. And upon this elementary sense of pitch-recognition and pitch-differentiation rests almost all of the more complex musical skills.

James L. Mursell says:¹ "Ultimately all musical hearing depends upon the native sense of pitch. This sense arises from the structure of the inner ear, which contains a harp-like mechanism, made up of a large number of separate filaments, each one of which is capable of vibrating sympathetically in tune with a certain tone and transmitting its particular vibration-rate to the auditory nerve. Clearly our ability to discriminate between pitches is rigidly limited by the number and sensitiveness of the filaments in the harp of the ear. We can never hear more than a certain number of tonal differences for precisely the same reason that the piano can only yield a certain number of tones—because the receptive mechanism is limited. . . .

"The elementary power to differentiate pitch is the foundation of many complex musical skills. On it depend such functions as tonal memory, accurate tonal imagery, the power to recognize and hear quality, the ability to sing and play in true pitch, and to some extent at least, the perception of harmony. Thus if the pitch sense is radically defective, it is impossible that the individual should possess a highly efficient musical mind. . . .

"It will be asked whether, if the power to dis-

¹ *Principles of Music Education*: Macmillan.

criminate pitch is so important, it cannot be developed by training. The answer is that it can be trained up to a rigid physiological limit—ultimately determined by the structure of the ear—but never beyond it. It takes a good deal of training . . . to bring us up to our physiological limits.”

ABSOLUTE PITCH.

Absolute pitch is the ability to recognize the actual pitch of a tone heard by itself. There must be no assistance or comparison of any sort. A tone is heard and the possessor of absolute pitch can name it or reproduce it immediately without faulty trials. It is a physical phenomenon. It may or it may not be put to musical use. When it is musically employed it is of great value, giving one the feeling of great comfort and familiarity when dealing with musical things. This ability is possessed in greatly varying degrees. One person may be able to name a tone produced on the piano, but may not, as another may, be able to tell if a tone is a fraction of a pitch off.

According to Shinn: “It is apparently due to the possession of an ear of a peculiarly sensitive and retentive nature, which has the power of seizing upon definite sounds, and by the remarkably acute susceptibility of the mind to sound-sensation has ingrained them so effectually, that they have become permanent or fixed ideas of pitch.”

According to Mursell: “The so-called absolute

pitch memory . . . is so spectacular at its highest development that it has come in for much investigation by psychologists. It used to be thought that absolute pitch memory arose from a mysterious ability possessed by a few gifted persons, but wholly absent in most, a notion that was borne out by the inability to explain it of most musicians in whom it is highly perfected. More recent studies, however, have exploded this notion. Especially conclusive is the fact that it is found possible to train musically nonselect groups, such as college students, toward absolute pitch apprehension, and that most persons improve under training. And now we recognize that there is an ability shared to some extent by most people, and perhaps by all who are capable of musical achievement."

Not having had access to the fore-mentioned tests it is difficult to say whether or not these findings are too optimistic. Besides, improving toward absolute pitch apprehension is one thing, and actually achieving it is another. It appears as if one either has absolute pitch or not, regardless of training.

Some writers think absolute pitch memory can be produced by perpetual repetition of the same pitch, thus establishing a memory for that pitch. This is doubtful; too many excellent musicians have never succeeded in producing the sense of absolute pitch. Certainly, there is room for more investigation.

However, the matter of relative pitch, taken up next, is far more important.

RELATIVE PITCH. (Interval Recognition.)

Relative pitch pertains to the ability to recognize a tone because of its interval relationship to, that is, its distance from, a previously heard tone. It is the most important element of auditory memory. The memory for tonalities, for example, does not depend upon absolute pitch, but rather upon a response to sound that has been built up by the sense of relative pitch. It need hardly be stated here that one need not possess the absolute pitch sense in order to possess the relative pitch sense.

The ability to play by ear is dependent upon the sense of relative pitch. Even if one possesses absolute pitch, a rendition by ear will be by means of relative pitch, although the key and the initial tone or chord may be ascertained by absolute pitch.

Ear-training should aim at the development of the sense of relative pitch, not absolute pitch. But the results will not be in the degree of sensitivity of the ear itself, but rather in mind-training. Interval recognition is not purely sensory; ear-training develops the mental functions that accompany sound-perception. The possession of a good ear should not exclude this training in sound-perception.

CHAPTER III

ANALYSIS

(Continued)

VISUAL MEMORY.

Visual memory is the memory for the images on the printed page or the images of the notes upon the keyboard. Visual-minded individuals retain a very clear picture of the printed music.

Visual memory, applied to the printed page, includes the special memories for abstract signs and symbols, and for written and printed words.

In the latter form—the ability to retain the images of the notes upon the keyboard—visual memory requires that the performer look at the keyboard considerably while practicing until this form of memory functions imaginatively. The habit of looking at the keyboard while playing from the notes is not a bad one. With experience the pupil learns to divide his attention between the page and the keyboard without any difficulty. Just how much attention should be given to the keyboard and how much to the page is impossible to say. The particular composition being performed will dictate this. When there are big leaps, for example, the eyes should be on the key-

board more than ordinarily. If the notation is complicated the eyes are needed on the page more than ordinarily. Accompanying the visual memory applied to the keyboard is the memory for the movements performed, which is motor memory.

A performer may aid his concentration by looking at the keys, and unintentionally may thus be building up visual memory. The value of the eyes in piano playing was under-estimated in the past; to-day its importance is understood at least by some, and the training of the vision is becoming a matter for ample consideration.

OBSERVATIONAL LEARNING.

Observational learning is a systematic process of sense-perception which is guided by a definite purpose. The goal, most often, is the acquisition of information. Successful observational noting involves the functioning of attention and will. One must learn to adjust and to direct one's sensory apparatus and to apply concentration.

Observational noting is the first step in the learning process. The imprinting stage of the learning process is directly dependent upon observational noting. It is by means of this activity that we first establish contact with the material to be impressed. This explains the importance of accurate note-reading, especially when we are first imprinting the material upon our consciousness.

Just as there are different types according to

memorial functioning, so there are similar differences in the manner of observation. And just as ear-training trains the mind to observe musical sounds through the medium of the ear, so must there be some training before the pupil can adjust and direct his eyes properly in note-reading. In other words, not only should a pupil be taught the facts of notation, but how to employ his eyes—how to see music clearly, quickly and accurately, and how to look at the keyboard properly. (See essays on Notation and Sight-Reading in Part IV.)

MOTOR MEMORY. (Memory of Movement.)

This form of memory as employed in piano playing has been called "finger memory", "muscular memory", and "kinaesthetic memory". It is the memory for muscular movements performed at the piano, movements under the control of that area of the brain known as the motor area. This form of memory implies a sense of place and movement from place to place on the keyboard; also a sense of key action—its motion and its duration.

Through motor memory one remembers the muscular sensations that accompany the production of various kinds of tone. Without this memory one could not acquire skill. The development of muscular dexterity, that is, of skillful movements while playing, depends mostly upon motor memory.

"When . . . passages progress in a systematic form, and are constructed upon some pattern extending

over an octave, so as to admit of a regular method of fingering, employing the majority of the fingers, and affording little opportunity for them either to operate in the wrong order or to make a false movement, such passages belong to the class most securely memorized by muscular memory. . . . We often memorize passages by muscular memory in merely learning to play them with ease and accuracy, and even when the music is before us, we frequently play such [from memory. . . ." (Shinn.)

Any figure that is repeated several times exactly is well retained by muscular memory. A good example is any basso ostinato (repeated bass). Of course, the repeated figure may be in the treble.

Through motor memory, actions which at first demanded special care and attention become almost automatic because of the exact repetitions performed. This very strongly suggests a need to adhere to one set of fingering. When a passage is practiced now with one set of fingering and then with another the result is confusion; there is an actual conflict between these two paths over the keys.

It is quite possible to employ muscular memory in one hand and some other form of memory to a greater extent in the other hand simultaneously. A repeated figure in one hand may be performed mostly by motor memory, while the other portion of the music, probably a melody, may be performed by virtue of auditory memory mostly.

The memory for rhythm is mostly motor memory.

MURSELL ON RHYTHM.

"Rhythm as such is not an auditory experience at all; and our experience of rhythm depends, not on what we hear, but on the feel of muscular play and activity in response to what we hear. . . .

". . . The body resounds more strongly, and responds more quickly to sounds than to sights. This is simply part of our native endowment. And the power of sound over the human body explains the strange and magical effect that music has upon us. . . .

"We feel the beat of a slow and ponderous rhythm in the large muscle sets that are attached to the long and slow-moving body pendulums. We feel the beat of rapid and hurrying rhythms in the small muscle sets that are attached to the short and quickly moving body pendulums. To give a concrete instance, the writer regularly feels the ponderous rhythm of the opening measures of the second movement of Schumann's "C-Major Fantasy" in terms of a swing of the whole body, while he feels the beat of the "Minute Waltz" as a sort of rapid chattering of the teeth. . . .

"The very longest and slowest rhythmic groupings are sensed in terms of the breathing, and the tension and relaxation in the diaphragm. Next come those slow and massive rhythms which we feel in the swing, incipient or actually carried out, of the

body as a whole, from the heels, the knees, or the hips. Faster rhythms, again, are felt in the feet and legs, though of course there is a pretty well-defined upper limit of speed here. The toes, again, provide a source of rhythmic grouping for faster and lighter rhythms, and many sense the beat of speedy concert waltzes here. The jaw, the lips, the tongue, and the larynx, again, are frequently used instrumentalities of rhythmic experience. Many a musician keeps time to music by incipient movements of the tongue, or by twitchings of the throat muscles."

AUDITORY-MOTOR MEMORY.

This form of memory is intellectual. It is the memory for unspoken words, for our inner thoughts. This form of memory retains for us the products of musical analysis, whether we are studying its literature or any problem relating to piano playing.

Analytical memory may be employed to a very little extent in very simple compositions, but its use in the memorization of long, complicated pieces is vital. Its use requires some knowledge of music theory. When applied to simple compositions very little knowledge of theory is required. As compositions become more complicated in style and structure more knowledge is necessarily required. And the more one knows about the theory of music, the stronger, that is, the more reliable, will this form of memory be.

Auditory-motor memory includes the memory for the teacher's spoken words, not only as words, but by virtue of the effect of these words upon the pupil's own intellectual processes.

ASSOCIATIVE LEARNING.

Auditory-motor memory is a very important element in the process of real learning, which is associative learning. After all, merely observing is not a complete act of learning; we must carefully build up correct associations. We must understand the meaning of the material in order to form correct associations. Associative learning is concerned with meaning-contents.

The associations formed during the learning of music literature are vaguer than those formed during the learning of a poem, for instance, but they are very important nevertheless. Following are some of the unending associations possible. There is the association of a group of tones and chords with a particular key-signature. A variation of previous material must be recognized as such—we must be able to perceive when material is new or old. Without such associations musical form cannot be recognized. One's interpretation of a composition depends upon a series of associations extending from the beginning of that composition to the end, often in a very elaborate scheme. Frequently, there are strongly related literary associations. This is especially so when a

composition has been composed according to a definite program, a program which has been passed on to the performer. The ability to recall demands some association. The greater the number of associations, the stronger the memorization; the fewer or weaker the associations, the more rapid the forgetting.

Just as there are differences in memory types, and differences in the process of observational learning, so are there differences in the processes of associative learning.

AUDITORY-MOTOR IMAGERY.

Auditory-motor imagery, in music, pertains to the ability to hear tones imaginatively. This imagery is closely related to auditory-motor memory. In fact, imagination may be defined as a form of reproductive memory. Accepting such a definition, auditory-motor imagery and auditory-motor memory are parts of the same function.

“The ability to use auditory imagery, or ‘inner hearing’, is another most important function of the musical mind. In some cases this power seems in-born, and we find an individual who naturally thinks and remembers in terms of musical tone. Where this is the case, there is almost certain to be high musical ability. But it is a power which can be cultivated by almost everyone, and to train it should be one of the tasks of musical education. . . .

"For the performer, the power to imagine the composition as a whole, or the individual passages in it, is extremely important and valuable in many ways. It helps him to decide how to render and interpret it without exhausting experiments, which indeed may defeat their own ends because attention during intensive practice is so apt to become fixed on the motor adjustments rather than on the sound values. The composer is always advised to train himself to hear his composition inwardly as he works it out. And the critical listener employs his power of inner hearing as the best working standard of judging a performance that is available to him . . .

" . . . Tonal imagery is likely to be very closely connected with muscular sensations of various kinds. Many persons inwardly sing or whistle a composition as they imagine it, and could not imagine it without so doing. Sometimes we have the experience of conducting rather than whistling or singing." (Mursell.)

HOW THESE MEMORIES FUNCTION.

One form of memory never functions alone. It is impossible to isolate and to use only one of them. The correlation of the various forms is very complicated, and the degree of dependence upon any one of these forms will necessarily depend upon the particular performer (the memory type) and the nature of the particular composition being performed.

The following generalities can be stated. Simple, melodic pieces will tend to rely on auditory memory; brilliant pieces (containing many runs) will tend to rely upon motor memory; pieces that are complicated in structure tend to rely upon auditory-motor memory. Visual memory, always lending its assistance, is probably the least important. But this does not mean it is unimportant.

Peculiarities in memory types may cause many variations in the above brief analysis. For instance, if one possesses visual memory to a very great extent, then the importance of visual memory will increase correspondingly. And, similarly, if one's auditory memory is very extraordinary in its development, it will probably be relied upon almost entirely even in rather complicated compositions.

However, all four forms of musical memory are important. Each form should be developed to its fullest possibilities, so that the memory as a complete unit may become truly fully developed.

"Each ideational type possesses certain advantages and certain disadvantages. . . . The elimination of differences in memory-types by devoting a special training to ill-developed types of ideating always brings with it a certain loss in one's connate type . . . but the loss is only a temporary one. . . . A perfect memory must have its foundations in an all-round development of ideation. The teacher should note the diversities of memory which are due to a relative

lack of one or other sorts of ideational content; and he should seek to eliminate these defects by appropriate training. . . . The ideational types of children are modified by long-continued learning.” (Meumann.)

It has been stated that one form of musical memory cannot be isolated, but that does not mean that we cannot emphasize the development of one over the others. For instance, the mere effort to remember the appearance of the score while practicing (by closing the eyes and trying to visualize that page imaginatively) will tend toward its development. In other words, it is possible to appeal more greatly to a particular sense organ, and in that way cause the development of the memories that mostly use that particular sense organ.

CHAPTER IV

INTRODUCTION TO THE PROCEDURE

AT WHAT AGE SHOULD MEMORIZATION BEGIN?

As soon as the study of any subject is begun, memorization must necessarily begin if there is to be any learning. The very first steps in piano playing cannot be learned without the function of memory. When the pupil learns a simple tune by rote his auditory memory must function. The first steps in the study of the keyboard and of notation cannot be learned without the employment of visual memory. The first movements at the keyboard cannot be acquired without motor memory. Learning involves memorization. From the very beginning of piano lessons the child is expected to do some thinking, and the memory for these thoughts (auditory-motor memory) is expected to function.

Let us now go on with the assumption that when we speak of memorizing a composition the *complete* memorization of the material for exact recall is meant.

The teacher must know that no technical knowledge is required to enable a student to memorize

a simple piano composition. It is of utmost importance that the teacher should not wait until the pupil reaches a high degree of execution before he introduces memorization. Should the teacher so delay, it may be found that pieces have become too lengthy and too difficult for the initiation of memory work, and complete failure may be the result. Such failure may cause cessation of music lessons for some unfortunate pupil. However, if the matter is made clear to him, the pupil's shattered confidence will probably be restored at least to the point of permitting his musical "re-education" with a capable teacher.

The necessity for starting the training of a student's memory at the first lesson cannot be overstressed. The importance of presenting to the pupil an efficient procedure at the very beginning has already been discussed. With a correct beginning the memory processes grow gradually stronger and more efficient, very often improving at a faster pace than the student's other musical abilities. Thus, when difficult and lengthy compositions are reached, the memory will function as readily and as successfully as it functioned during the early music lessons; perhaps more so.

Memory must be developed along with the acquisition of technique and general musicianship. Of course, it is truly impossible to acquire skill and musicianship (which go hand in hand) without em-

playing memory. What is meant here is this: the training of the memory should be a conscious procedure, not an incidental one. Acquiring technique and musicianship to a limited degree without acquiring the ability to play reliably from memory will lead to heartache and discouragement.

WHEN TO BEGIN MEMORIZING A COMPOSITION.

The student should begin to memorize a new composition immediately, at the very first day's practice period. It is very unwise to delay this very important activity. To play from the notes for days, and perhaps for weeks, and then to attempt memorization for the first time may cause complete failure. Memory work should be made part of one's daily practice. It is the *active* learning of the material. All other problems, no matter how important, can be solved while memorizing. In fact, they cannot be solved without it. Remember, all "after-effects" of previous experiences are forms of memory.

The idea, which seems very prevalent, that immediate memorization leads to mistakes is fallacious. Mistakes are almost always due to poor reading, fast practicing, and the lack of sincere purpose. The slow-memorizer with the faulty method (slow memorizing usually means a faulty method is being employed) will also make mistakes. To develop efficiency in learning, one should attempt to constantly increase one's speed in learning without making

mistakes. And if the memory process is purposely interrupted by the teacher (to correct faulty note-reading, for instance) the interruption should be only a temporary condition.

WHOLE VERSUS PART METHOD.

One of the first steps to be decided upon when work on a new composition is begun is how one should attempt to learn it: as an entirety (whole method), phrase by phrase (part method), or by the employment of a compromise between these two methods. Colvin writes very clearly on this subject:

“By the whole method is meant the memorizing of a piece of material by beginning at the commencement and continuing straight through to the end, following this method during the entire learning period. By the part method is meant learning the material in sections. . . . Notwithstanding the almost universal belief and practice, the part method of learning seems to be less economical than the whole method, especially when meaningful material is concerned. . . .

“The reason for the superiority of the whole method as compared with the part method in learning meaningful material is usually explained by the fact that in learning the material as a whole, the proper associations are formed. If a poem is learned stanza by stanza, then the associations set up are, for example, between the last words in a stanza and the

first words in the same stanza, whereas the proper associations would be between the last words in the stanza and the first words in the stanza next following. Hence, when the poem is learned by the part method, a large number of incorrect associations are formed, and this necessitates not only the learning of the new and proper associations, but the breaking up of the old associations as well. . . .

“. . . The pupil should be informed of the advantages of the whole method and his interest stimulated in learning by this means. Thus he will tend to overcome his inherent prejudices against the method, and will not so easily be discouraged, if results are not immediately apparent. Further, he should be told to study the whole piece to be memorized up to the point where the difficult parts become particularly prominent; then to confine his attention for a while to the difficult portions, and after that, again to continue learning by the whole method. He should also be instructed that after a certain time he should attempt to recall, as far as possible, what he has been studying.”

It can be seen that Colvin believes in the superiority of the whole method, but at the same time suggests certain modifications which should prove advantageous.

REPETITION AND OVER-REPETITION.

Repetition is important throughout the entire learning process. During the imprinting phase of

learning there should be more repetition than when the material has definitely been learned. Just how many repetitions a pupil should make during one practice period, one day, one week, or during the entire learning process; and just how many repetitions a pupil should make after the material has been definitely learned in order to secure increased retention, is a matter the teacher must attempt to settle for each pupil individually.

“The more complete the mastery and the more perfect the command which we wish to obtain over any memory material, or the more easily, certainly and permanently, and the more accurately and completely we wish to be able to reproduce it, the more must we bring into operation this activity of sheer imprinting and its chief means,—the attentive repetition of the material.” (Meumann.)

“Make more repetitions than are needed for immediate recall. In learning it is also best to make more impressions than are needed to insure recall. Such over-learning is valuable because things drop out of mind very rapidly after they have been learned.” (William F. Book.¹)

After a material has been learned so that it can be repeated once from memory, additional repetitions gradually become less and less effective according to Ebbinghaus. This indicates that many more repetitions are needed to retain material after its first recall. Since repetitions after a certain point

¹ *Learning How to Study and Work Effectively*: Ginn.

become less and less effective, there is a point when it is well to cease making these repetitions of a particular composition and to spend the available time on other material.

PERIODS OF PRACTICE. (Their Length and Regularity.)

Shorter practice periods are more beneficial for very young children because their attention lags and fatigue overtakes them sooner than in the case of older pupils. As children grow older they grow more capable of sustained interest and attention, and practice periods can be lengthened. As children grow older their memories improve. This improvement should bring about great success in the study of music, and this success will invariably bring about still more sustained interest and attention.

Another factor in determining the length of practice periods is the time it takes the pupil to "warm-up". In other words, some students need considerable time in which to pick up their work where they left off. For these pupils practice periods should be lengthened according to the amount of time required for this "warming-up" process. For them one long period is more efficient than two shorter ones.

Another factor is suggested by the previous essay on repetition. Repetitions after a point become less and less effective. This statement may be applied to a single composition, and it may be applied to a group

of compositions. After a point has been reached when the repetition of any composition seems very ineffective, the practice period should be terminated. Individual factors will determine the time it takes to reach this point.

QUANTITY OF MATERIAL.

“The fundamental question is: Does difficulty of learning increase proportionately with increase in amount of material? Or does some other relation obtain between these two variables. Ebbinghaus formulated the law that difficulty of memorization does not increase in direct proportion with increase in amount of material, but that larger groups or greater masses of material require a disproportionately greater number of repetitions. . . . Weber discovered that the law of Ebbinghaus is valid only for unpracticed learners. The more training one has in memorization, the more does the number of repetitions show the very opposite relation; that is, the learning of large masses of material demands relatively fewer repetitions than the learning of smaller masses of material. . . . It is a matter of every-day observation that our task progresses more readily when we make it a part of a larger task than when we set about it independently. Our awareness of the fact that the task is larger leads us unconsciously and involuntarily to a keener and more effective concentration of our energies.” (Meumann.)

Meumann has stressed some psychological aspects of the matter. Of course, this "awareness of the fact that the task is larger" may have the opposite effect upon a pupil who, temporarily at least, is totally unambitious. In addition, practice methods play a very important rôle in the handling of large quantities of material.

VALUE OF RECALL.

Only by means of the recall (the exercise of the reproductive end of the memory process) can we know that memorization has taken place. We do not know whether or not we have been successful in memorizing our material until we attempt its reproduction. In music study the recall should be a matter of daily routine, and the recall should be exact. In this manner we can make sure that progress has been made in one's memorization. The very knowledge of the fact that recall will subsequently be attempted will produce a more attentive attitude during the practice period.

"... Experiments indicate that recall is always an aid in the learning process, and that the recall should be interspersed in the learning; in other words, that during the study of the material the student should, from time to time, turn away from the work and attempt in visual or other imagery to recall it to his mind. . . . Recall is particularly valuable because it enables the pupil to discover his errors and correct indefinite and hazy impressions. He holds himself

to a more strict account in recall than he does in memorization with the material directly before him.” (Colvin.)

In the foregoing quotation we find a refutation of the prevalent idea that errors result when memorization is attempted very early in the study of a composition. The sooner a pupil begins to memorize his new composition, the sooner recall is exercised, the sooner will hazy impressions be strengthened and mistakes be discovered and corrected.

THE RATE OF LEARNING.

Later in this book there is an essay on slow practice. In Colvin's book we have mention of the necessity of slow practice from the psychological point of view.

“The rapidity with which an individual reads over or studies the memory material which he is trying to master is termed the rate or tempo of learning. This varies not only with different individuals, but with the same individual at different stages of the learning process, and also with different kinds of material. It also varies with age and other conditions, physical and mental. It, however, holds generally true that for the preliminary orientation of the material to be learned the rate should be not as rapid as for later learning. It is obvious that when the nature of the material is more or less unknown, it is desirable to first proceed slowly, so that no mistakes shall be made in apprehending it, either in its detailed parts

or its general meaning. When, however, it has become more or less familiar, the rate of learning should be increased. It is further true that for children the tempo should not be as rapid as for adults. The character of the material and the aim of the learning will also determine in a measure, the rate, as has been said above."

According to Book:¹ "Rate of work is due to two things: (1) to one's method of work and (2) to mental quickness, including promptness in decision and execution. Both are vital for efficiency. It is the inhibitions and the lost motion caused by a lack of organization and by our indecisions that cause the greatest waste of both our energy and time."

WILLIAM F. BOOK ON EFFICIENT LEARNING.

¹ "The acquisition of knowledge involves, besides selecting and concentrating upon the thing to be learned (attention), (1) the impression or learning of the facts to be acquired; (2) their retention by the learner; (3) the ability to recall what has been learned; (4) recognizing the facts as familiar or old when they are reproduced for effective use in further learning or in our work. Improvement in one's method of acquiring new knowledge and facts must therefore provide for advancement in all these ways.

¹ *Learning How to Study and Work Effectively*: Ginn.

“If you wish to memorize anything in the most economical way, such as a poem, a formula, a list of dates, an argument, an outline, etc., you should see (1) that it is clearly understood; (2) that a need for it is felt; (3) that the material is repeated with the intention of fixing or remembering it; (4) that attention is sharply concentrated on this material; (5) that several senses are brought to bear on the material; (6) that appeal is made to the favored sense department; (7) that first impressions are carefully made; (8) that the time devoted to the necessary repetitions is scientifically distributed; (9) that important material is impressed before going to sleep; (10) that new and extraneous materials and stimuli are not introduced immediately after this thing has been learned; (11) that the material is repeated at short and increasing intervals; (12) that more impressions are made than are needed for a first recall; (13) that the material to be learned is attended to as a whole as well as in parts; (14) that the work is approached with the belief that it can and must be learned; (15) that the material is impressed by active recall; (16) that the material is impressed by first recalling what you already know; and lastly, (17) that you are well rested and in good physiological condition before you begin.”

Most of the rules laid down by Book have been justified by remarks already made in this treatise. A few additional remarks are, perhaps, not amiss.

Rule two, "that a need for it is felt", points to the necessity for the teacher to give the pupil material that he will enjoy. Number nine, "that important material is impressed before going to sleep", is not always possible and not always necessary. In the case of a very young pupil it is not even desirable. A young pupil is most often too tired to work efficiently just before bed-time. In fact, many older students and concert pianists prefer the early morning hours for their most important work. However, if, for some reason, a pupil cannot practice during the morning or afternoon, something can be accomplished even late in the evening regardless of how fatigued he may be. It is possible to work through a period of fatigue, unless that condition threatens to produce a physical breakdown.

In number ten, "that new and extraneous materials and stimuli are not introduced immediately after this thing has been learned", Book does not imply that new material may not be introduced before the previous material has been completely learned. By so doing, a feeling of staleness, that is often caused by spending too much time on given material, may be relieved and even entirely removed. The freshness introduced by the new material may cast its reflection upon the other material and bring about its quicker memorization.

CHAPTER V

THE PROCEDURE

PROCEDURE AT THE PIANO BY ROTE.

At the beginning of lessons, especially when the student is very young, the rote method (instruction by means of imitation) may be relied upon to a great extent or even entirely. It is advisable, however, that the pupil be allowed to see the notes occasionally. He may also be taught the first facts of notation, such as the location of middle C and second line G in the G clef, and middle C and fourth line F in the F clef. And then, slowly, as the pupil is taught by rote, he gains familiarity with note-reading as a natural outgrowth of his experience. An important principle of education is: experience should precede fact-learning. When the child has reached the point where he can read the notes of his simple pieces, his procedure becomes that which is described in *The Procedure at the Piano from Note*. However, rote teaching should never be suddenly and completely discarded.

Rote learning is imitative learning. The part method is imposed upon us here. But the whole

method can be used to a certain extent by the teacher's performance of the entire piece (which will, in all probability, be very short) as often as he deems it necessary. The actual learning, of course, must be by the rote method. The child can learn only so much at one time and no more.

In presenting a new composition by rote the first step is for the teacher to play (and also, if there are words, to sing) the composition several times. This will give the pupil the conception of the selection as a whole. Then the procedure is from the whole to the part—another important principle of education. The teacher takes a small portion of the piece, as much as he is sure the pupil can grasp as a unit, and plays that much. Then the child attempts to play it. If the child fails to remember this small portion of the composition, then the teacher plays it again. Finally, the child should be able to play that portion of the piece without assistance. Rote learning means immediate memorization—a very good point in its favor. It also demands attentive listening—another good point.

The main weakness in rote learning is the employment of the part method so exclusively. The child must, necessarily, learn one part thoroughly before adding the next, a procedure that is distinctly opposed to the procedure in the next essay, a procedure which has as a prerequisite the ability to read the score.

The average beginner's piece can be learned quite quickly by rote, especially if the child's ear is good. It can readily be seen, however, how rote teaching applied to a lengthy composition would prove a hindrance to fast learning.

Rote teaching can be indulged in to some extent even after the pupil can already read his notes fairly well. A newer, more difficult piece (or any, for that matter) can be begun or assisted by rote and then finished later by the other procedure. Even in advanced teaching imitation has its place.

THE PROCEDURE AT THE PIANO BY NOTE.

A new composition should first of all be sight-read from beginning to end without stopping anywhere. In this way every new composition serves first of all as sight-reading material, and the pupil must not overlook this important phase of piano study. Mistakes must be avoided while imprinting first impressions. Faulty first impressions will probably result in a faulty performance from memory. Slow practice, the right way to begin a new composition from the psychological and the physiological view-points, makes it possible to avoid errors. (See Slow Practice, Chapter XII.)

Do not begin with separate-hand work. Naturally, sight-reading calls for two-hand work at the start. But even after this initial sight-reading do not resort to separate-hand practice. Read the composition

through several more times. In this way the most difficult portions of the composition will be discovered and given special concentrated attention subsequently. Even these most difficult portions should not be done with separate hands unless the problem warrants it. In other words, do not make a fetich out of separate-hand practice! (See *Separate-Hand Practice*, Chapter XII.)

So far in this procedure both the whole and the part methods have been used in their most useful combination. We have read the piece through as an entirety to begin with, thus gaining an accurate conception of the entire composition as it should sound (except for our sacrifice of tempo) and we have concentrated on the especially difficult portions.

After the first day's practice from the notes is finished, the memory should be tested; the recall should be put to work immediately. Before the first day's work has been completed, at least the first measures should be completely memorized. This will make the student more confident, because he will see some definite results at once. This is one of the good features of the part method of learning. This complete memorization of at least part of the composition will aid in the subsequent memorization of the entire composition.

If there are several parts to a piece, the first few measures of each part should be learned at once. The correct relationship, that is, the proper associations,

between these parts must be established, however. This is, again, a compromise between the whole and the part methods. Never practice phrase by phrase, which is the part method applied to music. By this method we mean the learning of one phrase before attempting the next, and so on. Reasons for this have been given in the essay on the whole and part methods. In addition we may say: the procedure of progressing phrase by phrase gives the first phrase, which may be the easiest, very much more practice than the last one, which may be the most difficult. In the phrase by phrase method the first phrases may be practiced for days, or even for weeks, before the last ones are reached. A sensible method of working demands that the difficult measures are not left for last, but should receive attention immediately. It is advisable to concentrate the memory work on the most difficult measures. By so doing, these measures will seem much less formidable.

The training of the memory should be a conscious procedure. Make certain that the memory is developing, do not leave this to chance. Do not take the daily memory test lightly, the recall is of utmost importance in an efficient procedure.

It is often possible, and even advisable, to memorize a composition before its keyboard problems have been fully solved. Practice a new composition very slowly, memorize it very quickly, and then play it from memory at a slower tempo until it can be

gradually worked up to the proper tempo. Then add this composition to your repertoire, not to be forgotten quickly, but to be retained by occasional practice and performance for friends.

A longer composition can be done the very same way as a shorter one if the pupil has been properly prepared for it by training. If the composition is a sonata and the pupil is expected to learn all of it, it is possible to have the pupil begin each of the movements simultaneously. Of course, decisions along this line will depend greatly upon the individualities of the pupil.

The pupil must do his best to avoid errors in the first practice periods. Errors in the final rendition of a composition can very often be traced back to these early practice periods. Through the early exercise of recall early misconceptions should be discovered at once and corrected. Mistakes are anything but economical. They do not permit clear, efficient memory work. Furthermore, substituting right impressions for wrong ones is a slow, painstaking operation, and the time spent in making these corrections may be considered as practically wasted. Pupils think they have the right as human beings to make at least a few mistakes, and then proceed, in this frame of mind, to make entirely too many!

A procedure for memorization is actually a procedure for good practice. Good practice must have as its goal the accurate and complete memorization

of the material and of all the movements required in playing it, the memorization of all ideas associated with this composition, its interpretation and performance. When the pupil plays from memory he is forced to use his power of musical imagery. This, according to Mursell, is one of the chief values in memory playing.

The teacher must show the pupil exactly how to be economical with his practice time, how to accomplish the most in a limited period, since no pupil, especially one attending school, has sufficient time to do what is expected of him unless he is trained to be very efficient during his practice periods.

THE PROCEDURE AWAY FROM THE PIANO.

(Mental Rehearsal.)

An important phase of procedure, one not very often indulged in by the pupil, is that of mental rehearsal, which is the contemplating of the performance of a composition away from the piano. A great degree of concentration is necessary, and much good results from this. The strengthening of the power of concentration itself is of great value. When one can play a piece with exactness mentally (by means of one's power of musical imagery), it is then safe to say that it has been learned. This practice of mentally rehearsing a composition is employed by practically all successful concert pianists. If one can visualize a composition away from the instrument

there is little danger of a lapse of memory while performing in public. The feeling of security and sureness resulting from successful mental rehearsal is of immense benefit.

We may add here that not only is memory work away from the piano possible and of great value, but so is it also advisable to read music away from the piano. This may be done before playing the score, or after. This activity should help to develop the ability of inner-hearing.

REPERTOIRE. THE REPERTOIRE CLASS.

The importance of maintaining a repertoire should be emphasized from the beginning of lessons. Proper memory training should result in a sufficient repertoire, the size and the quality of which must necessarily vary according to the individual ability and requirements of the pupil.

Of what use is it to learn compositions and then to allow them to fade away altogether from lack of use? The teacher faces a huge responsibility here. He should keep a list of each pupil's repertoire numbers, and keep on reviewing them from time to time. Compositions not worth reviewing are probably not worth studying in the first place.

As a student advances, old pieces may be permitted to be forgotten, and newer ones should take their places. It is not necessary to remember every com-

position forever. It is also necessary to know when to forget.

Demand a repertoire of the pupil and he will finally produce one. If one is not demanded, the chances are that there will be none. Nothing will please pupils and their parents more than the ability of the pupils to play several pieces satisfactorily from memory at any time. It is not sufficient that a pupil play one or two pieces well from memory. There must be quantity as well as quality. The quantity improves interest, and also has an important bearing upon technique, a matter discussed in Part IV, Related Essays. It is sufficient to say here that the greater the variety among repertoire numbers, the greater the opportunity for technical and musical advancement. When, instead of dull exercises and studies, the best of musical compositions are relied upon for the student's technical work (a very good procedure) this assumes a greater importance in teaching.

Of great assistance in developing a repertoire is a class where pupils may play for one another. This provides a steady incentive for quicker and better memory work. Also, these performances before others provide ideal training for the student concerts and the miniature recitals. If it is not possible for the teacher to have a repertoire class, playing for one another may be made part of a general class in music appreciation.

STUDENT CONCERTS.

Student concerts are absolutely necessary. The pupil must have the opportunity to exercise at least part of his repertoire before large audiences. The student concert provides a strong incentive for the pupil. A public performance affords the pupil an experience not available at lessons, the experience of playing for an audience.

It is a good procedure to use compositions for student concert programs that have been studied at least once before. These compositions are usually performed more reliably in public than newly learned material. Occasionally, a pupil may be trusted to perform a composition that has just been completed, but the teacher must know whom to trust.

The student concert is an excellent medium for showing the results of the teacher's work to students, parents, and to the public.

Proper memory training should produce a worthy repertoire which must be exercised. Pupils should perform at student concerts year after year, and their progress carefully observed. Student concerts are most successful when the numbers are rather short and the entire concert not too long (between one and a half to two hours, rarely longer).

THE MINIATURE RECITAL.

When a pupil has a repertoire of about ten or twelve compositions, he should be permitted to give a recital by himself. This recital, because of its very short program, has been termed "miniature". A miniature recital should be the goal of every pupil, not a far-off goal, but one quite immediate. They should not be for talented pupils only. Every child beginning piano lessons should expect to be able to give these miniature recitals some day. One, however, cannot be expected to say exactly when. The preparation of many miniature recitals is indeed a very difficult task, but, if lessons have been conducted along efficient lines, it can be done successfully.

In cases of extraordinary talent, there is no better preparation for a public debut than a series of these miniature recitals, which, extending over a number of years, grow longer and more ambitious each year.

Following are a few programs for these miniature recitals. It is hoped that they will assist teachers in the presentation of similar ones. It should be noted that each program contains some well-known classics and also a few "modern" numbers. Some of these modern numbers are listed in the catalogue of modern compositions at the end of this volume. The programs are more interesting when the numbers are arranged chronologically.

(1)

Prelude, C Major

(#1 Well-Tempered Clavichord) *Bach*

Solfeggietto *K. P. E. Bach*

Fantasia, D Minor *Mozart*

Little Rondo, C Major *Beethoven*

(Intermission)

Prelude, E Minor *Chopin*

Waltz, E Major *Chopin*

Nocturne, G Flat Major *Borodin*

Cloches *Turina*

(Encores)

(2)

Prelude, B Flat Major

(#21 Well-Tempered Clavichord) . . . *Bach*

Gavotte, B Flat *Handel*

Sonata, G Major (1st Movement) . . . *Haydn*

(Second Piano Part for Teacher) . . . *Saar*

Preludes, C Minor and A Major *Chopin*

Funeral March of a Marionette . . *Gounod-Saar*

(Intermission)

A Sentiment *Potamkin*

Reverie *Strauss*

March (from *Enfantines*) *Bloch*

Loneliness *Powell*

Pastorale *Rhene-Baton*

(Encores)

(3)

Sarabande, D Major	<i>Bach</i>
Sonatine, C Major	<i>Clementi</i>
(Second Part for Teacher)	<i>Johnstone</i>
Prelude, E Minor	<i>Chopin</i>
Waltz, G Flat Major	<i>Chopin</i>
(Intermission)	
Reverie	<i>Strauss</i>
May Night	<i>Palmgren</i>
Prelude, E Flat Minor	<i>Scriabin</i>
Golliwogg's Cake-Walk	<i>Debussy</i>
Minstrels	<i>Debussy</i>
(Encores)	

RÉSUMÉ.

Memory is the basis of all learning. In order to insure economy in learning it is necessary to provide pupils with a good procedure. Every normal person possesses some degree of musical memory, and this memory can be greatly developed.

Work for both speed and accuracy in memorization. Rapid learning should not mean faulty learning. Memorization should begin when music lessons begin and should be stressed all the time. Begin to memorize a new composition immediately. Practice the recall as soon and as frequently as possible. Employ the whole method of learning while still retaining the better points of the part method, such

as concentrating on difficulties and stopping occasionally to ascertain the degree of success at various points.

There is no substitute for repetition, but avoid thoughtless or needless repetition. The length of practice periods should be adapted to the individualities of each pupil.

The first step in a good procedure for learning at the piano should be the slow, careful sight-reading of the new composition. Avoid errors during this process. Do not practice with separate hands unless it is suggested by some difficulty.

Build up the pupil's repertoire. He should mentally rehearse these compositions, and perform them as often as possible for groups of people. The importance of memorization cannot be over-emphasized. All problems connected with learning music and its performance at the piano should be mastered during the memorization process. In fact, they cannot be mastered without it. The following very brief outline of musical memory should show how memory work stretches into every phase of piano study.

1. Auditory Memory. (The sense organ is the ear.)
 - a. Memory of pitch and intensity. (Pitch is the raw material of music, and the higher functions depend upon the sense of pitch for their success.)

- b. Ear-training and harmony-training fall largely under the functioning of this memory.
- 2. Visual Memory. (The sense organ is the eye.)
 - a. Memory for symbols, numbers, etc. (Memory for the printed page.)
 - b. Memory for keyboard locations, and the appearances of the notes upon the keys.
- 3. Motor Memory. (The memory of the muscles.)
 - a. Memory for movement from place to place and duration.
 - b. Memory for rhythm depends largely upon motor memory.
- 4. Auditory-Motor Memory. (The memory of the "intellect".)
 - a. Memory for intellectual processes, ideas and thoughts.
 - b. The study of musical analysis depends largely upon this form of memory.
 - c. All of the other forms of musical memory are aided by this memory, as, in fact, they are by one another.

By this brief analysis it can be seen that complete memorization does not refer only to reproduction at the keyboard, but it involves the memorization of all facts and all actions. When memorization is stressed, technique cannot be overlooked, nor can ear-training, musical analysis, interpretation, etcetera.

Part II:
TONE-PRODUCTION

CHAPTER VI

THE PHYSICAL BASIS OF TONE-PRODUCTION

INTRODUCTION.

There can be no effect without cause. Education should link cause and effect together. Scientific research in the realm of tone-production on the piano has opened stores of information of which the modern piano teacher must avail himself, if he is to become very efficient. Uninformed teachers may teach faulty doctrines which may mean failure for most of their pupils. True, some talented pupil may, by chance, discover some of the truths of his art for himself. However, he may not, and it is certainly not a matter to leave to chance.

The goal of excellent technique lies at the end of the path called correct tone-production. It must be cautioned here that facts about tone-production are no substitute for musical imagery, but they surely help in executing these musical images at the keyboard. It is absurd to attempt to teach piano playing without teaching the art of tone-production.

Beginners must be taught correctly from the very

start. Therefore, even teachers of beginners must also understand the scientific facts underlying tone-production.

According to Otto Ortmann:¹ "What we actually hear and what we imagine we hear, what we actually do and what we imagine we do, when listening to or playing upon a piano are distinctions urgently needing a clear exposition . . .

"Every pianistic effect existing for audition, including the most subtle shades of emotion, can be fully explained in terms of the physical attribute."

HISTORY.

The forerunners of the modern piano may be put into two classes: those whose strings were plucked by quills, or spines, in imitation of still earlier instruments which were plucked by the fingers; and those whose strings were struck with hammers.

The most important of the latter group was the clavichord, a rectangular instrument which appeared in the fifteenth century. It can be traced back to the dulcimer, the first stringed instrument which was hammered and muffled (with the hands), and to the monochord from which the keyboard developed. The introduction of percussion as a method of tone-production was a big step towards the invention of the piano.

The most important of the group of forerunners

¹ *The Physical Basis of Piano Touch and Tone*: Dutton.

that were plucked was the harpsichord, which also made its appearance in the fifteenth century. Its keyboard was similar to that of the clavichord. Others in this group of forerunners were the virginal, the spinet, and the clavecin.

The invention of the keyboard in the eleventh century was another big step towards the invention of the piano. And by supplying hammers to the harpsichord, which was shaped very much like our own grand piano, the first piano was created.

Bartolommeo Cristofori (1653-1731), an Italian, is usually credited with having produced the first piano in 1709. In France, Marius produced his piano in 1716; and in Germany, Christoph Gottlieb Schröeter produced his in 1717. Neither of these men seemed aware of the work of the others.

The early pianos had very little standing beside the clavichords and the harpsichords. Bach preferred the clavichord to either the piano or the harpsichord. But soon the influence and suggestions of the great composers and virtuosi were heeded by the mechanics, many of whom made contributions of their own. Clementi and Pleyel, for instance, were composer, virtuoso and mechanic—all three. However, they were exceptions.

Gottlieb Silbermann worked to satisfy the sharp but valuable criticism of Bach. George Andreas Stein, trained by Silbermann, manufactured his pianos to meet the demands of Mozart, who liked the light

Viennese action. It was Nanette Streicher, daughter of Stein, who developed the piano to meet the wishes of Beethoven. One of these developments was a larger keyboard.

An important step forward in the construction of the piano was the introduction of metal, which enabled the instrument to stand terrific strain. This was about 1820. And it was Liszt and Rubinstein who, because of their powerful attacks at the keyboard, forced the manufacturers to continue to strengthen the piano. Liszt often used two pianos during one recital! And, according to some accounts, Rubinstein's attack was at times more forceful than Liszt's!

Hans von Bulow demanded greater volume of tone and mellowness. Joseffy demanded greater elasticity of touch and purer tone-quality.

Most of the virtuosi who influenced piano building were also important composers. It seems as if the greatest part of the credit for the development of the piano should be given the composer.

It was Josef Hofmann who suggested the most recent improvement of the Steinway, the "accelerated action". Since the days of the harpsichord, the keys of the piano sat flat. Frederick A. Viotor, grand-nephew of C. F. Theodore Steinway, who had a similar relationship with Franz Liszt in 1873, decided to try balancing the keys sensitively on little curved fulcrums so that they actually respond to the

touch instead of having to be budged into action. The action of the Steinway is now faster. The hammer drops away from the string with greater precision; and the momentum in which the key returns to position as the finger is lifted is greater.

THE INSTRUMENT: A BRIEF ANALYSIS.

The instrument consists of a case which protects the entire instrument-proper; the sounding board which influences the quality of the instrument immensely because it is the amplifier (without which the tones produced by the strings would be practically inaudible); the sounding-board bridge which transmits the vibrations of the strings to the sounding-board; the wrest-plank bridge which regulates the various levels of the strings necessitated by overstringing (easily seen by examining the strings of a grand piano); the strings; the action; the pedals; and the dampers.

The action of the piano has at one end the key, and at the other end the hammer which strikes the string when the key is depressed with sufficient force. It is a complicated series of levers, a machine which obeys all mechanical laws. Part of the action consists of: a "hopper" action that allows the hammer to fall back at the moment the string is struck so that it cannot jam against the string and stop its vibration; a checking device which prevents the hammer from rebounding again after it has fallen back

from the string; and a repeating device which facilitates the rapid repetition of the same tone without permitting the key to rise completely. In ppp playing the rise of the key need not be more than $1/8$ th inch.

Through the piano action energy is transferred into speed. The energy is applied to the key (which can only move vertically $3/8$ ths of an inch or less), and the speed is transferred to the hammer (which can move about two inches). The speed at the hammer end of the action is about five times greater than the speed at the key end.

THE KEY AND THE STRING. (Key Speed and Quality of Tone.)

Only by depression can tone be produced. The manner in which the key is depressed (its downward speed) determines the manner in which the hammer strikes the string (referring to the upward movement of the hammer). There is contact between the action and the strings only at the moment the hammer strikes the string, which is of exceedingly short duration, never of greater duration than in the production of a staccatissimo tone.

When the string is set into motion by a fast moving hammer, the result of a speedy key-depression, the harsher, more brittle, unmusical tones of short duration are produced. The more sympathetic effects, the more beautiful tones, arise only when the key has been depressed gradually.

The control of key speed is secured by controlling the application of the force. This means controlling the weight and the muscular exertion, the distance the energy travels, its direction, and the point where the energy is applied to the key. The smallest difference in tonal quality indicates a corresponding difference in key-speed.

“The effect of a force upon a material body depends upon three things; its numerical value, its direction, and its point of application. The numerical value of the force acting on the piano key varies between zero and the limit set by the physiological capability of the player; the direction of the force may be any line in a tri-dimensional space, between the horizontal and the descending vertical; the point of application is limited by the length of the key seen on the key-board, about six inches. . . . Practical piano playing demands that the key be struck from various angles. . . . The effect is greatest when the force acts in a line with key-descent, which on the piano is vertically downward. . . . The further the point of application is from the fulcrum the greater is the effect of the force. . . . As the mode of touch deviates from the vertical type, more force is required to produce the same tonal effect. . . . The further we deviate from the vertical the greater is the loss in force-effect; the further we deviate from non-percussion the greater is the loss in tone-control.” (Ortmann.)

KEY-BEDDING.

Tobias Matthay, noted English piano pedagogue, says he invented the term some twenty years ago in his *Act of Touch*. He defines key-bedding as follows:¹

Key-bedding is "the fault of applying the muscular impulse intended to produce a tone *too late during key descent* to effect its purpose. It denotes misapplication upon the key-beds *of the force intended to produce key-movement. . . .*"

This misapplied force is complete waste from the instrumental aspect. Of course, keys should be put all the way down (with just the amount of energy required) and kept down for the full duration of that tone (with sufficient relaxed weight—unless pedal is employed). But this does not imply key-bedding. There is no misapplied energy.

SOME CONCLUSIONS BY TOBIAS MATTHAY.

² "a): The Pianoforte key is a machine to facilitate the production of Speed in the String. It is a compound-lever, akin in principle to the Sea-Saw.

"b): It follows, that Tone-production can only be effected by giving Motion to the key; since this forms our only means of conveying motion to the String.

"c): Energy brought to bear upon the Key *ceases* to create Tone, the moment that the place in key-

¹ *The Visible and Invisible in Pianoforte Technique*: reprinted by permission of the author, and Oxford University Press.

² *Act of Touch in All Its Diversity*: Longmans, Green & Co., Ltd.

descent is reached, where the hammer's motion culminates, and causes Sound to *begin*.

"d): The act itself of Tone-production can hence never take longer than it does in the most extreme *Staccatissimo*.

"e): The Ear apprises us of this moment more quickly than can any other of our senses; hence we must *listen* for the beginning of sound, if we would have Accuracy in tone-production.

"f): The greater the total speed we induce during each individual key-descent, the greater is the *Tone-quantity*.

"g): The more *gradually* this key-speed is attained, the more beautiful is the *Tone-character*,—the fuller, more 'sympathetic', singing and carrying is its *quality*, and the finer is the tone-quality.

"h): The more *sudden* the key-depression, the harsher is the resulting Tone-quality; it may be more 'brilliant', but it will be less effective in carrying power.

"i): The *softest* possible sound is obtained when *Weight* is brought upon the key until a point is reached where the key's opposition (or resistance) to movement is just overcome—and it consequently slips down with the most gentle movement compatible with its hammer reaching the string.

"j): Such amount of Weight, allowed to remain resting upon the key, *beyond* the moment that the latter's full depression is reached, forms the effect of

TENUTO. The duration of such Tenuto is determined by the duration of such Resting.

“k): The effect of LEGATO is induced by *transferring* such continuously resting light Weight from key to key; such Transference being unbroken for each Musical Phrase.

“l): Weight of less amount than this, insufficient therefore to cause key-depression, may be left resting on the keys without causing either Tenuto or Legato.

“It is such *lightness* in resting, that forms the Basis of all STACCATO effects, provided it is combined with an accurately-aimed Promptness in the *cessation* of the Energy that causes *key-descent*; for the keys are in this case left free to *rebound* the moment that Tone-production is completed.

“m): Such combination (of light Resting and accurate Ceasing of the act of key-depression) also forms the secret of all great Agility in playing.

“n): It is futile to *squeeze* the key upon its bed with the object of inducing tone; since sound, if produced at all, is given off *before* the key reaches its full depression.

“o): It is almost as futile to attempt to obtain good tone by *knocking* the key; since the concussion here caused at the key-surface forms *waste* of the Energy intended to create tone, and this engenders *inaccuracy* in the tonal-result,—the actual tone obtained not corresponding to the tone intended.

“p): We find that instead of squeezing the

key-bed, or hitting the keytop, that correct Tone-production demands:—that the finger be brought comparatively gently into contact with the key-board surface, so that the Energy requisite to move the key may be there estimated by our *sense of key-resistance*. As the key-resistance varies with each change in Tone-shading, this will lead to the requisite *muscular-conditions* being almost automatically prompted into existence,—in accurate response therefore to the dictates of our musical consciousness as to Time, Tone-amount, Tone-quality, and Duration.”

CHAPTER VII

THE PHYSIOLOGICAL BASIS OF TONE-PRODUCTION

INTRODUCTION.

Tone-production is a result of key-manipulation—its depression. Naturally, a key cannot be depressed without some movement of limb and muscle. Certainly the manner in which the body behaves during piano playing should be a matter of great importance to the piano teacher.

“The concert artist, if he so chooses, may work as he will, remaining his own problem, or, perhaps, finding his own solution; but the teacher, selling lessons in physiological mechanics hour after hour, day after day, should at least know the tools with which he works. But, too often, he does not; and since he constantly uses his arms and fingers, he usually resents the assertion that he does not know how they are used.” (Ortmann.¹)

HISTORY.

In the previous chapter some history of the in-

¹ *The Physiological Basis of Touch and Tone*: Dutton.

strument was given. There was, of course, a corresponding development physiologically.

The early keyboard instruments, those of the days of Bach and Handel, had very light mechanisms. Very little strength was required to manipulate the keys. The strength of the fingers, acting without the aid of larger muscles, those of the upper-arm and shoulder, was sufficient for proper key manipulation.

As the instruments improved, their actions became heavier. The fingers alone were definitely insufficient for easy performance. Failure to realize the importance of the larger muscles brought about a great strain on fingers, hands and forearms. Cramp and stiffness were common occurrences. In those days the hand was held in a set position and exercises were practiced over and over, the aim being independent, articulate finger action. According to Thomas Fieldon, only the very talented went beyond a certain point, and then not because they did as they were taught, but rather because their greater ability and imagination led them past that point. However, the success achieved by these few did not alter everyday piano teaching.

The first epoch in piano playing was characterized by the stroke touch, a touch that was sufficient when applied to the easily-responding mechanisms of the early instruments, but which could hardly help cause cramp and stiffness when applied to the heavier mechanisms of later instruments.

The second epoch may be said to be that of pressure. This was soon followed by a third epoch, that of weight playing. In this latter style of playing, the fingers are kept on the keys or as close to them as possible. There is no waste motion of any kind, and therefore the greatest possible conservation of energy.

Recent findings have definitely proved that the muscles that control the fingers do not lie entirely in the fingers themselves, but in the hand and in the forearm. The efficiency of the action of the fingers is influenced indirectly by muscles as far remote as those of the upper-arm, shoulder, and even the body itself. In order that moving parts should not be hampered by too much contraction in these parts themselves, larger muscles must be employed. Otherwise there is impeded movement with resulting stiffness.

The newer schools introduced the factors of appropriate muscular relaxation, and the unlimited, but carefully measured, use of weight. The modern style of piano playing may be said to be a compromise of all styles. Fingers are permitted to do what they can relatively alone, without the aid or the interference of the larger muscles. But, as more power is required, the muscular spread is greater, that is larger muscles become active. These muscles may supply their power by the loose fall of weight or by pressure, visibly or invisibly, percussively or non-percussively. The goal is always the same—ease of proper tone-production.

From Maria Levinskaya we quote:¹ "Most of the eminent living exponents, although brought up on the great traditions of independent finger articulation, nevertheless realize the necessity of arm weight, and apply its swing in different proportions according to their artistic promptings. Whilst Liszt, Rubinstein, Carreno utilized the powers of the swinging arms to the fullest extent, the exquisite art of Paderewski, Godowsky, Rosenthal, Hoffman, Bauer, exploits the hidden and less obvious resources of weight and energy of the arm, with wonderful reserve entirely free from any affectation and unnecessary movements . . .

"Deppe is generally accepted as having been the first to advocate 'playing with weight' and 'free fall' of the finger, but, as we have seen, the rudiments of these existed long before though in a more nebulous form. . . . *Utilisation of weight is not synonymous with complete looseness and relaxation.* . . . Fixation . . . does not imply stiffness. . . . *Looseness-without-loss-of-control and exactitude is only made possible by the judicious application of muscular tension.*" We can combine "*the swing and throw of weight of one part of the limb, with tension or fixation of another . . .*"

"We [Breithaupt is quoted by Levinskaya] hope

¹ *Levinskaya System of Pianoforte Technique*: Dutton.

that the legend of the antagonism between 'playing with the fingers' and 'playing with weight', which was invented by the lack of comprehension in my critics is now definitely removed. . . . The misunderstanding evidently arose because our criticism against exaggerated active finger technique of the old methods has been most stupidly interpreted as a direction that one should not any more play with the fingers at all. . . .

"I [Levinskaya] consider that *the foundation of the teaching of the future lies in this simultaneous development of muscular control of precise finger articulation—and of all other muscular actions, and releases—together with exploitation of weight of any parts of the arm.*"

THE SKELETON.

The entire skeleton of the human body is used in piano playing. However, the most important parts are the vertebrae, the collar-bone, the shoulder-blade, the bones of the upper-arm and forearm, and the bones of the hand.

A joint is the place where two bones form contact with one another. A bone can only move at a joint. The important joints, pianistically, are where the upper-arm meets the shoulder; the elbow-joint; the radio-ulnar joint (the radius and the ulna bones are in the forearm); the wrist; and the knuckles.

Joined to the sides of the bones are ligaments,

which, although they are plastic, are virtually inelastic. Most of the exercises devised for loosening the joints are useless, and many times injurious. Freedom of movement at the keyboard is directly dependent upon the anatomy, upon the movements possible at the joints.

From Otto Ortmann, we quote the following principles: "1. Any key on the piano may be reached effectively in a multitude of ways. 2. The position in which any key is played is determined by the position and manner of playing the preceding and succeeding keys. 3. The best manner of making a movement to a certain point on the keyboard varies with the individual, and among other things, is determined by skeletal structure. 4. The physiologically best movement is the one permitting motion near the middle of the range of the joints involved.

"Another conclusion to be drawn from the skeletal structure of the shoulder region and arm is that any extended movement of hand and finger involves movements in all the other joints. Every actual movement made in piano-playing involves simultaneously movements in various joints, the degree of participation varying as the movement continues."

THE MUSCLES.

Opposed to the passive nature of the skeletal structure is the active nature of the muscles. These are the organs of movement, the part of the anatomical

structure which makes possible, without outside force, the movements performed at the piano.

The simplest muscular movement represents co-ordination of the muscles involved. It is a muscular complex. The greater the extent of the force of the movement, the greater is the spread of muscular activity. The more extended or forceful a movement, the more necessary is the activity of the larger muscles. Absence of motion does not necessarily mean absence of muscular activity. No muscle is limited to the production of a single movement. It has secondary and tertiary functions. Restrained action is one of the main faults that prevent acquisition of technique. We must act muscularly without restraint and we must know when to cease applying this muscular force.

The muscular system is of a dual nature physiologically, to move into position and to maintain that position. In most instances the maintenance of position requires less expenditure of energy than the attainment of that position. Thus a large group of muscles may be needed for producing a big tone, but a smaller group of muscles are all that are needed for "holding" it.

The following excerpt is from Jacob Eisenberg:¹ ". . . All muscles overlap and make coördinated action among them necessary for their most efficient and

¹*Natural Technics in Piano Mastery*: Wm. Reeves.

graceful functioning. These divisions of muscular action are:

“(a) Muscular action which causes the whole arm to move. These muscles extend from the shoulder and body and join the arm in the upper-arm.

“(b) The muscular action which causes the forearm to move. These muscles extend from the shoulder joint to the elbow joint in the forearm.

“(c) That muscular action which causes the fingers to move. The muscles that raise and lower the fingers extend from the elbow joint of the forearm, narrow down to tendons which join muscles to bones, pass through the wrist, and join the fingers at the second joint. The muscles that separate the fingers and draw them together again are in the hand.”

MATTHAY ON SKELETON AND MUSCLES.¹

“It is physiologically and psychologically *impossible* for us directly to provoke or prompt any particular muscles into activity by any act of thinking of it or wishing or willing it, no matter how concentrated our effort. Muscles can only be provoked into action INDIRECTLY, by our willing a particular *limb-exertion* or *movement*. The muscular processes needed for many quite simple actions are so complex as to be practically unthinkable, even if we could

¹ Reprinted from *The Visible and Invisible in Pianoforte Technique* by permission of Matthay and Oxford University Press.

separately prompt the required muscles into action—which we cannot do. What we must know, *and can know*, is what particular stresses and relaxations are required for the *various portions* of our *playing-limb*—which parts of the limb to exert and which to leave passive. This knowledge *is* attainable, and is immediately and directly helpful. Such knowledge, however, cannot be got at *from without*, neither from eye-evidence nor from anatomical conjecture. It can only be obtained through analysis from within—by analysis of the *sensation* experienced while actually producing the right effects, and in no other way. Only by the *sensations* thus experienced can we realize what are the *limb-conditions* that obtain both in good and in bad playing, and by calling up or recalling such *sensations* we can then reproduce the effects and can acquire right habits, and can teach others to acquire them. Here, however, we are faced with a difficulty. Those few gifted ones, who instinctively stumble upon Right Doing, physically, are usually precisely the ones least fitted to help us by self-analysis. The greater their temperamental, emotional and musically-imaginative gifts, the more likely are they to be disinclined, opposed and even resentful towards any exercise of self-analysis mechanically and physically. Hence we find that these usually prove to be quite bad teachers, technically, in spite of their own well-doing. Nevertheless, it is only a successfully musical player, who has really

achieved technical mastery, and is *at the same time* gifted with powers of analytical and mechanical reasoning (a rare combination) who can possibly supply *the needed information*; that is, HOW IT FEELS, *physically, to play rightly*, and also how it feels to play *wrongly!*”

THE NERVOUS SYSTEM.

The power that operates the bone-levers is the energy within the muscles. This energy is under control of the nervous system, and can be directed by will-power. The intimate sensations of muscular control are of the utmost importance to the player and while the motor nerves command the movement, it is through the sensory nerves that he becomes conscious of his sensations.

“In piano-playing the whole learning and playing process is inseparably bound up with nerves and their centres: the spinal cord and the brain. The functional unit of the nervous system is the nerve cell or neuron. Of this there are three kinds: sensory, motor, and intercalated. The sensory cells bring the neural impulses in from the sense organs, the motor neurons carry the impulses out to the muscles, and the intercalated cells join, in a very elaborate scheme, the cells of the other two groups. The three groups are also called receptors, effectors, and conductors, respectively. Thus we have the three fundamental requirements of a nervous system: a means for con-

ducting, transforming, storing, and elaborating them, and a means for expressing through movement, these impressions, memories, and elaborations. . . .

“The value of repetition and drill is to transfer the neural representation of a movement from the higher brain centres to the lower spinal reflex centres. Repetition—normally manifold—is thus physiologically necessary in piano practice, and no adequate substitute for it exists. . . .

“The whole neural system is opposed to isolated or disintegrated action. The smallest movement of piano technique, as used in actual playing, involves, actively or passively, the trunk as well as the arm, hand, and fingers.

“Piano technique, for its adequate acquisition, demands a coördination, not only among the organs of any one sense-department, but among the various sense-departments, as well: auditory, visual and kin-aesthetic. . . .

“Efficiency of bodily movement, including the fine movements used in piano playing, is directly connected with a particular area of the brain known as the motor area.” (Ortmann.)

THE CIRCULATORY SYSTEM.

All piano teachers are aware of the effects of cold hands upon skill and accuracy. These cold hands may be due to a momentary condition of the circulation, in which case the condition is easily remedied, or they

may be due to a serious circulatory defect, in which case the difficulty will require medical attention.

“Efficiency of bodily movements, especially the fine movements of piano technique depends, in part, upon the conditions of the circulation. An adequate blood supply to nerves and muscles is absolutely indispensable to their proper functioning. Variation in the technical proficiency of piano pupils can, at times, be traced directly to variations in the respective circulatory systems. A correction of these circulatory defects will then correct these technical defects. . . .

“The effect of impaired circulation upon the mechanics of physiological movement is twofold: it impairs both speed and accuracy.” (Ortmann.)

CHAPTER VIII

POSITION

THE POSITION AT THE PIANO.

One should sit in front of the centre of the piano, far enough away from the instrument to allow the entire arm freedom of motion. Sit far enough away from the piano to secure a slight upward slope of the forearm. With the forearm in this position, the weight of the playing apparatus can be controlled best. One should always sit at the same location in front of the keyboard in order to assist in the training of the sense of distance, a motor sense. The distance to a certain key or chord should always be the same if possible.

Few teachers are aware of the paramount importance of a low position at the piano. "You may have the soul of an angel, yet, if you sit high, the tone will not be poetic", said Deppe, according to Miss Amy Fay in *Music-Study in Germany*.

Do not allow the body to recline away from the piano. The power should move toward it not away from it. The right foot should rest so that the heel can still be on the floor when the pedal is being used.

The left foot may be kept near the soft pedal, if this pedal is to be used, or it may be placed several inches or more behind the right foot. Young children who cannot reach the floor should have a foot-stool to rest their feet on, although this is not absolutely necessary. Some young performers must, when using the pedal, occasionally assume a position of slight discomfort.

The shoulder should be relaxed. It must not be held in a tense, raised position. Of course, when great volume is desired, the larger muscles are brought into play and that means the employment of the muscles of the shoulder. However, the employment of the shoulder muscles may be in the form of "invisible" pressure. Shrugging movements of the shoulder involve the shoulder-blade and the collar-bone.

The elbow should be held away from the side of the body, free and ready to move, ready to guide the forearm, which in turn guides the fingers over the keys. Part of the weight of the arm is supported at the shoulder and part of it is supported by the finger on the depressed key. The elbow is suspended between a loose shoulder and a firm finger-tip. Avoid excessive movement at the elbow-joint.

The wrist should be about level with the forearm and the top of the hand. We must not forget that there are individual variations that will change this normal position, but the changes should never be

very radical. A wrist kept too low will not be comfortable, and a wrist kept too high will tire very quickly. A lower wrist position is generally more desirable than a higher one. The habit of turning the wrist inward should be avoided. The direction should be the opposite—away from the body.

“. . . Of all physiological instruments of movements, the hand with its appendages is by far the finest. The twenty or more joints and nearly thirty bones that make up its structure and their manipulation by over thirty muscles make possible very fine adjustments of movement, and help to account, among other things, for the surprising dexterity of many pianists.

“Modern pedagogy, practically without exception, has adopted the arched-hand position and has given up the flat position. . . . In the flat hand the muscles are pulling at the least effective angle. . . . In the arched-hand . . . this angle has been considerably changed, the muscles now acting at a decidedly greater mechanical advantage. The onset of fatigue is known to be, in part, dependent upon the mechanical efficiency of the leverage system employed. The use of an excessively flat hand-position in order to strengthen the finger flexors by making them work in the least efficient position is not to be recommended. Such a position [results in] a hypertension at the hand-knuckle, a typical incoördination which piano technique strives to overcome.” (Ortmann.)

The knuckles should be but slightly pronounced. Of course, the intensity will effect the position, a great intensity causing the knuckles to be more pronounced. Some old methods claimed depressed knuckles produced clearer finger work. However, this is physiologically unfounded; an excessively flat hand or depressed knuckles will produce incoördination, and, if continued, much stiffness.

Leschetizky, it is said, held his knuckles greatly arched, and while it is true that this led to great muscular development of hand and fingers, greatly arched knuckles are not necessary—muscular development can be procured without them. The tendency to acquire great muscular strength for pianistic purposes has oftentimes been exaggerated. Great muscular strength is not a necessity to the average pupil.

The curved finger is the normal finger position. The nail-phalange should be vertical with the key and never broken inward. Even if the finger is occasionally less curved, this nail-phalange should still not be broken. Broken finger-tips is a weakness, pianistically, and must be guarded against. No great technical skill and strength can be secured with weak fingers. Even the amount of skill the average pupil desires to achieve cannot be reached if broken finger-tips are tolerated. The thumb nail-phalange should run parallel with the key most of the time. This is altered for big stretches. The fifth-finger side of the hand should be held slightly higher than the

thumb side. This will aid in the development of the fifth finger side of the hand. Do not keep the fifth finger curled up when not in use, treat it as you do the second, third and fourth fingers.

A good general rule to follow about finger shape is this: the closer the keys to be played, the more curved the fingers, the more vertical the nail-phalanges; the further apart the keys, as in large chords played solidly or broken, the less curved the fingers, at times almost straight.

ADJUSTMENTS.

It must be understood that the position just described cannot be maintained while playing. However, one should vary this position only as little as is necessary. Exaggerations are never called for. An understanding of these adjustments is necessary. When fingers move over the keys, the hand must necessarily move with them, and perhaps may have to change its position slightly at the same time. And as the hand changes its position, the position of the rest of the playing apparatus must also change, since the entire playing apparatus is a leverage system.

The best way to explain these adjustments to the pupil is for the teacher to indicate, while the pupil is playing, exactly when and how to make them. For instance, a pat on the shoulder should tell him that his shoulders are being held too high and tense. He should correct this immediately. If the pupil's el-

bows are too close to his side, the teacher can easily move them into proper position without causing the pupil to stop playing. The pupil will grow accustomed to such treatment and will learn to respond quickly.

The entire playing apparatus from the shoulder to the finger-tips is a leverage system, and if one part is out of order the whole system will be out. And, similarly, if the teacher will correct one part, like lowering the wrist, the remaining levers will adjust themselves—elbows, knuckles, and finger-tips will assume better positions. Assuming a correct position at the start is no guarantee that this position will be changed appropriately as the student proceeds.

A proper style of playing will do more to strengthen the pupil's hands and fingers than mere gymnastics. Occasionally, the teacher will find a pupil who naturally holds his arms, hands, and fingers properly. But this is a rarity. Almost every pupil, even the most gifted, needs some physiological instruction as to position and condition.

INDIVIDUAL DIFFERENCES.

Along with the understanding that adjustments are necessary while playing must go the realization that there are individual differences in arm weight, the size and shape of the hands, and in the length, width and strength of the fingers. It is impossible to force all hands into one standard position. But it is possible and advisable to have a standard position as a guide.

The hands and fingers of pupils vary enough to make one set of fingerings for a certain passage, suitable for one pupil, entirely unsuitable for another.

As to muscles, the differences are not only those of strength, but also those of location and multiplicity. There may even be a complete absence of a muscle.

“The fact that the hands of some pianists are soft to the touch, and those of others are firm, is not an index of muscular strength. The soft hand can readily result from good relaxation, which, as we have seen, is prerequisite to proper coördination. Such a hand can at a moment’s notice contract into a firm position, by appropriate muscular contraction. And it can with equal rapidity, relax again. In fact, in this immediate relaxation, after the need for fixation is over, we find one important element of kin-aesthetic talent.” (Ortmann.)

CHAPTER IX

RELATED ESSAYS

RELAXATION AND RIGIDITY.

The term "relaxation" is used and very much abused in teaching. We do not play the piano with complete relaxation—some degree of rigidity is necessary. But rigidity does not mean stiffness—it merely implies a lesser degree of relaxation. It is utterly impossible to produce very loud effects without some rigidity, which should not be constant, but applied where and when needed.

Relaxation is very important as a prerequisite of piano playing. Then while playing we should remain as relaxed as the problem at hand will permit. There should be no excess motion, especially rotary motion and movement of the elbow. By the application of adequate muscular tension, looseness without the loss of control is made possible. The proper coördination will enable one to attain the proper degree of relaxation. Scientific tests have proven that the range of dynamics is greater with rigidity than with relaxation. However, rigidity need only be employed for that part of the dynamic range that demands great brilliancy. At all times we should take

things as easily as possible. Choose the easiest way of doing things well.

Stress on relaxation should never be allowed to induce a fear of great intensity and strength of tone. Rigidity as employed in piano playing should be voluntary. By means of rigidity, accents, which are a necessity in interpretation, are produced.

PERCUSSION *versus* NON-PERCUSSION.

The style in which one plays determines the quality of the technique. We are talking now about that part of style that has to do with actual tone-production. We know that some pianists adopt what may be called "the grand manner", but this is rather for show than for sound-effects. Excellent pianists should have no need to attract an audience through some unique manner of performance—the sounds produced should be all-important. This should be a guide in teaching. Although mannerisms are undesirable, this does not mean that a performer must never allow any emotional reaction of his own to his music-making.

Piano playing need not look as if it possesses an element of danger, as if everything is accomplished with great risk. Actually the audience should be made to feel that everything is accomplished with great ease and safety. Let us draw a distinction between drawing room playing and vaudeville!

The main difference between any style and an-

other is the difference between percussion and non-percussion as applied to the keyboard. There are, then, chiefly two styles, percussion and non-percussion, although there are degrees of each style.

In percussive touch the key is struck by the finger as it moves toward the key from a raised position. If the finger is resting on a key it must first of all be raised high and then brought down without stopping when it first touches the key. If it does stop then, the touch, as far as tone-production is concerned, will become non-percussive. The effect of high fingers striking the keys is very unmusical, producing harsh, brittle tones of short duration. This style becomes absolutely a hindrance in the performance of compositions of a lovely nature, demanding a great deal of cantabile playing.

In non-percussive touch the entire force desired is not used at the beginning of key-descent, but we add more and more weight as the key descends. In other words, we set the key into motion gradually. In percussive touches the key is not regulated throughout its descent, but only at the moment of impact. In non-percussive touches the key is regulated throughout its descent, making very sensitive playing possible. Through this control we can secure just the right speed for the appropriate tone-quality, for the appropriate tone-intensity. The difference between curved and straight fingers, and between high and low wrists can be resolved to the difference be-

tween these two styles, percussion and non-percussion.

Non-percussive touch is the proper one for almost every act of tone-production. Brilliancy of tone does not demand percussion necessarily—extra weight from the arm and shoulder may be employed as pressure. Non-percussive touch is the only proper one for the beginner and the very young pupil.

FINGER-STROKES.

The normal finger stroke demands that the fingers be kept curved (the nail-phalange is vertical to the key, excepting the thumb nail-phalange which runs horizontally) on top of the keys, touching them. From this position a pupil can produce a medium tone with no finger-lift being necessary. And even for more tone the lift is unnecessary, as explained before. For a still louder, more brilliant tone a slight lift may be useful.

Normally, all other factors being equal, the flat finger will produce a softer tone than a curved one. But this relationship is changed immediately after the muscular set-up is changed. If muscular contraction is applied to the flat finger the tone need not be soft. And a properly controlled curved finger can produce a remarkably soft tone.

“a. Straight finger-playing is stiff and unnatural, besides it produces hard, harsh, uninteresting or weak tones. b. This position tires the hands quickly. c. It is impossible to execute rapid passages, because one

is obliged to move the whole hand with an up and down movement for each key depression which unnecessarily consumes time and effort which may be used to better purpose." (Eisenberg.)

A source of trouble to many piano teachers is the limitation in movement of the fourth finger. "This results, primarily, from the presence of ligamentous bands connecting the tendon of this with that of the third and that of the fifth. They affect finger lift, not the downward stroke. No amount of practice can overcome entirely this physiological limitation. What practice does is to extend the band slightly and to increase the force of the fourth finger stroke, thus making less lift necessary for the production of a tone of given intensity. The fourth finger never reaches the independence of the others." (Ortmann.)

Playing by weight destroys the necessity of lifting the fourth finger high, if at all. Teachers employing modern principles of weight playing (and pressure playing) should encounter no difficulties with the fourth finger.

STACCATO AND LEGATO.

In staccato playing we allow the key to rebound at once. However, the finger may remain on the surface of the key after the rebound. Moving the hand several inches upward after the key has returned does not affect the tone in any way. The mo-

tion, often employed for its aid to relaxation, is not a necessary one.

In legato playing more weight is allowed to rest on the key after tone-production, enough to keep the key down, but no more. The weight is then transferred to the next key, via the finger-tip, but not before a perfect connection has been accomplished. In connecting one tone to another the first key stays down until the next key is put down, and it is allowed to rebound as immediately following the new tone as possible. If this transfer of weight is delayed, that is, if we keep the first key down a trifle longer, we produce the *legatissimo* touch.

In non-legato playing the weight of the playing apparatus concentrated at the finger-tip is lifted from one key and placed upon the next one with but a slight separation.

“. . . Mechanical principles . . . indicate that . . . weight transfer is not a simple, uniform mechanical operation, but one varying with other factors of technique.

“The mechanics of weight-transfer may be briefly stated as follows: The application of weight to the piano-key means a certain degree of muscular contraction. As this weight is transferred to another finger, the muscles controlling that finger are appropriately contracted in order to support the weight; and the muscular contraction for the first finger is correspondingly lessened as weight is released. If the

relaxation for the first finger is greater than the contraction for the second finger, weight is lost. . . . But if the release is slower than the following contraction, there will be no loss of weight. Rather, there will be an overlapping of weight, which, on an instrument made to record weight fluctuations, will show in an actual increase of weight. On the keyboard it will result in unnecessary pressure upon one of the two keys. . . .

“The greater the amount of weight to be transferred, the greater is the muscular adjustment necessary for the transfer. The efficiency with which the transfer is made thus depends upon intensity: the actual quantity of weight to be shifted.

“Percussiveness itself, we may expect, will interfere with the efficiency of weight-transfer. Experiments have shown that the judgment of weight is seriously hampered when any percussiveness is present, and, since weight-transfer is but another form of judgment between weights, this interference will certainly operate here too. . . .

“We may logically expect to find the efficiency of weight-transfer decreasing as the speed of successive finger-strokes increases. In rapid finger-strokes the time intervals between any two successive strokes is too short to permit the transfer to take place smoothly, hence fluctuations are bound to occur.” (Ortmann.)

MECHANICAL INSTRUMENTS.

Pupils cannot be taught how to produce tones by practicing on mechanical instruments. The nature of the muscular movement is determined by the tonal effect desired and so the absence of this tonal effect or its adequate image deprives the organism of the chief determinant of the muscular coördination.

Some writers say that the field of mechanism in piano playing must not be confused with the actual playing of the piano itself. They would endorse the use of mechanical instruments just for the sake of muscular development, if for nothing else. They would advocate strenuous mechanical exercises of all sorts. With these writers, gymnastics have a very important place in piano teaching.

The view-point expressed here is very different. Muscles trained by actual piano playing are better equipped for piano playing than muscles trained away from the piano. To repeat a previous remark: the tendency toward great muscular strength for piano playing purposes is a foolish one. The value of pianistic gymnastics has been very much overrated; they are great time-wasters. They can be dispensed with entirely as far as the average student is concerned.

RÉSUMÉ.

The older schools of piano playing taught exaggerated finger development from the knuckles.

After this came the pressure touch, then the weight touch, and last of all a compromise between all previous styles of touch. We should do with fingers what they can do alone, that is, apparently alone. Actually the fingers are moved by muscles in the hand and forearm. We may employ the free fall of the hand and the arm; we may employ the use of the shoulder. We may apply pressure as a means of tone-production or use the free fall of weight.

With the newer schools of technique arose two new elements of piano playing. The first was a greater degree of muscular relaxation applied with great discrimination as to degree; the second was the unlimited use of the arm and even the body, without, however, showy excess. It must be cautioned that relaxation and use of weight does not mean that finger action is ever neglected, or that finger action is ever permitted to become smeary and blurred. This is never tolerated!

No matter how we hold our hands, how we strike the keys, how we relax, how much we curve our fingers, etc., we can do nothing else to the key than move it $\frac{3}{8}$ ths inch or less vertically downward. All shades of tone are produced while the key is moving through this very short distance. We should select the most correct position for playing. For this the teacher requires at least an elementary knowledge of physiology in its proper relation to piano playing.

Also, he must know the main facts of his instrument from a physical angle. A combination of the physical and the physiological knowledge permits us to secure the desired effect most easily and accurately and most comfortably. Minimum energy should always be employed. When we play the piano we produce sounds of various pitches, intensities, and durations. Nothing more! Certain touches are effective only because they enable us to secure a proper relationship among these variables.

In any pedagogy the distinction between cause and effect, and the relationship between them, is an important one. Again—tonal quality is pre-determined by the performer's power of musical imagery, which should develop with the acquisition of important information. Facts, of course, cannot substitute for musical imagery. But they can assist it and guide it to a great extent.

What one hears is the result, and while the teacher should tell the pupil to listen to each tone after it is produced, he should also train the pupil to listen to each tone *before* it is produced. This, again, is done through the power of musical imagery. Then we decide exactly how to produce that carefully pre-conceived tone. Then we are dealing with cause. Cause and effect go hand in hand and should always be considered together.

Correct principles are acquired as easily as incor-

rect ones. If the training of the beginner is correct, then subsequent principles will be acquired easily. But if, in the beginning, wrong ideas are instilled in the pupil, the difficulties are increased greatly by the demands made by more difficult music.



Part III:
PEDALLING

CHAPTER X

PEDALLING

INTRODUCTION.

All pianists and teachers agree upon the importance of pedalling in piano playing. However, analysis of the use of the pedals is rarely given its proper attention at lessons. Except for a few general directions from the teacher, the use of the pedals is usually left to the individual taste of the pupil—a most dangerous procedure!

The greatest danger lies in the indiscriminate over-use of the pedals, especially of the damper pedal. Pedalling demands precision. The pupil must not only be taught how to manipulate the pedals with his feet, but must also be taught *why* they are employed at a particular place, and exactly when to apply and release them. The “ear” is the best guide.

Algernon H. Londo says:¹ “There is no more subtle art in connection with pianoforte playing than that of the correct management of the pedals, especially the right hand pedal. Yet this being so, it is strange that so few books have been written upon

¹ *Pedalling in Pianoforte Music*: Dutton.

this subject, and that the amount of space devoted to it in most works upon pianoforte playing is of a comparatively meagre description."

Without doubt, pedalling, as employed by great pianists, is extremely difficult, but to the average pupil its use is secondary to the all-important problems of tone-production at the key-board. Pedalling should not be an overwhelming problem if the pupil is supplied with clear explanations.

HISTORICAL SIGNIFICANCE.

A general rule to follow is: the earlier the date of the composition, the lighter the pedalling should be. The earlier the composition, the more is it harmed by over-pedalling.

Many compositions which are now played on the piano were not written for it, but for the fore-runners of the piano, like the clavichord, the spinet or virginal, and the harpsichord. The pedal in these pieces is of little significance.

Among the earlier composers Bach is often an exception. Many of his passages demand a great use of the pedal in order to secure the organ-like effects sometimes desired. Bach was essentially an organist, not a pianist.

The use of the pedal gets more important as we approach modern times. Chopin, for instance, requires considerable pedalling. Debussy and Ravel are completely at a loss without it.

WHEN TO INTRODUCE PEDALLING.

Pedalling should be introduced when the pupil meets a composition which requires it for its complete interpretation. If, for any reason, the teacher feels that the student should not be permitted to use the pedals, compositions requiring pedalling should be avoided. A very important prerequisite for pedalling is physiological—the pupil must be able to reach the pedals. The foot should rest comfortably on the pedal with the heel of the foot on the floor. It should never be necessary to hit the pedal with the foot.

The most important element in pedalling is the listening ability of the pupil. He must be keenly aware, through his ear, of what is happening to the sounds he produces as he applies a pedal and then ceases application.

No preparatory training in pedalling is necessary. When a composition requires it, pedalling should be employed. With proper instruction the pupil should meet no great difficulty.

Most pupils are greatly pleased when they are told that they may use the pedals for the first time. Even young pupils enjoy the richness that the damper pedal adds to their performances. Indeed, the addition of the pedal may make some simple pieces sound quite impressive. The pleasure pedalling affords a pupil is very important psychologically.

Try the excerpt from Pierre Arbeau's *Bercement*

(#1 in the catalogue at the end of the book) with and without employing the damper pedal. Notice the unsatisfactory result when the pedal is not used. Contrast this result with the one obtained when it is employed.

THE DAMPER PEDAL.

When one speaks about pedalling, one usually is referring to the right pedal. This pedal, often incorrectly called the "loud pedal" (there is nothing loud about it—it may be used when the music is pianissimo), is more correctly called the damper pedal. Even this name tends to create a misconception of it. The pedal is not used to damp the music; it is used to enrich it. It is called the damper pedal because it controls the whole row of felt pads which are above the strings and which are called the dampers. It would probably be better to name it the sustaining pedal, but this might cause confusion with the sostenuto pedal, the middle one when there are three pedals. Jacob Eisenberg suggests calling this pedal the "magnifying pedal". However, in this book we will employ the most general term, "damper", and when the term pedal appears alone this damper pedal is the one that is meant.

In order to understand the damper pedal we must also understand the dampers themselves. The dampers are little wooden blocks faced with soft material, usually felt, which lie upon the strings. When a key

is depressed the damper is lifted off the string just before the hammer reaches the latter and the string is thus left free to continue to vibrate until the key is released and the pedal is discontinued. When the key and the pedal are released the damper falls into its place upon the string just before the key reaches its upward limit. The damper pedal raises and lowers the entire row of dampers. The damper stops the vibration of the string in the same manner that a tympanist touches his tympani to stop its vibration.

THE USES OF THE PEDAL.

The pedal has three uses: (1) to sustain, (2) to enrich, and (3) to emphasize rhythm.

(1) When legato playing is desired and the fingers alone cannot accomplish it the pedal is employed. For example: When a broken chord extends over more area than the fingers can reach; when deep bass notes are followed by chords that are too far removed to allow the hand to connect; when long melody tones must be sustained and at the same time the fingers must be free to execute passage work.

(2) The pedal is used to enrich our music even when we can connect without its assistance. We may even use the pedal on a staccato chord for this enriching effect, although the effect will be momentary.

(3) The third use of the pedal is a rhythmic one. The application of the pedal on accented points adds emphasis to these points.

According to Jacob Eisenberg: "The pedal is one

of the most interesting and fascinating appurtenances employed in producing variegated effects upon the piano.

“(a) It renders a beautiful tone more beautiful; a sonorous tone more sonorous; and a velvety tone more velvety.

“(b) It aids in punctuating the reading of a composition; in phrasing, in producing rhythmic effects, and in creating desired nuances.

“(c) It aids in sustaining tones for a longer period than would otherwise be possible. It makes legato passages sound legato which without its use, might be semi-detached.

“(d) It adds life and body to a performance. It helps to bring out the intent of the composer and the personality of the performer.

“(e) It gives added power where that power is necessary and with the desired sonority.

“(f) It gives an added softness and flowing roundness to *pianissimo* passages, qualities so much desired in artistic performances.

“In short, the proper employment of the magnifying pedal will make a fine performance a thing of greater beauty, while an improper use, even with the same finger execution will result in a performance of mediocrity.”

HOW THE PEDAL IS USED FOR LEGATO CHORDS.

In a series of legato chords the pedal is depressed

immediately after a chord is struck, held down until the next chord is sounded, and then it is immediately released and depressed again, while the hand is still holding down the keys. The hand must hold the keys down until the tones are caught by the pedal. The application of the pedal to a certain chord must always *follow* the production of that chord. The hand must hold the chord until the pedal is firmly depressed. The use of pedal in legato chords helps the performer shape his hands for the following chord and actually place his fingers upon the next set of keys.

In a series of legato chords that are very fast, the depression of the pedal must follow its release very quickly or there may be no connection. When the tempo is very slow there may be more time between the release of the pedal and its subsequent depression, but not necessarily will this always be desired. If a series of slow chords is of great intensity, it is advantageous to depress the pedal as soon as possible, because the sooner the pedal is applied after a chord is struck the greater is its effect. This is because the tones will be caught by the pedal when they are strongest. In a series of legato chords that are both slow and soft, it is, similarly, advantageous to delay the depression of the pedal. The problem at hand will help decide just what should be done.

Never release the pedal before the chord is sounded, or there will be no connection between that

chord and the previous one. The pedal, when released, should rise completely, unless for half-pedalling or tremolo-pedalling, so that the dampers may be sure to fall upon the strings and stop the old vibrations.

The pedal should be changed at every harmonic change, except in certain modern compositions where overlapping of harmonies may be distinctly called for.

SYMPATHETIC VIBRATION.

The second use of the pedal is to enrich the music. This is of very great importance in modern music. The enrichment is caused by sympathetic vibration. When the pedal is down and the dampers are off the strings, certain strings not struck will vibrate in sympathy with those that are struck. Not only tones directly related to the strings originally set into motion are heard, but the longer the pedal is continued the more other strings begin to vibrate because of the relationships that are constantly being formed. The tones which are more active in this enriching process are explained under Overtones.

“The actual effect of the pedal, if used with accuracy and discretion, is to surround the music with an atmosphere of appropriate harmonics and overtones, which though devoid of the actual significance of recognizable individual tones, yet serves to enrich the phrases and to add colour and background to the musical outline.” (Lindo.)

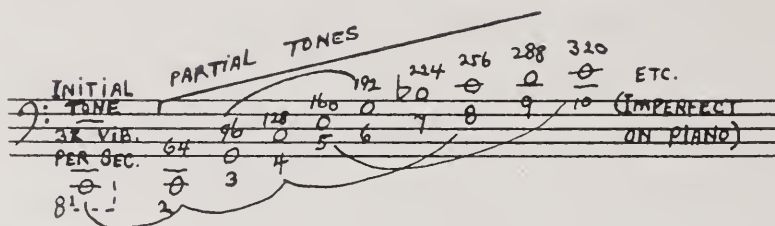
OVERTONES.

A string not only vibrates as a whole string, but vibrates simultaneously in divisions. It vibrates also in halves, thirds, quarters, etc. When the whole string vibrates, the pitch represented by that string is heard; it is the pitch represented by the key that is depressed. When the string vibrates in halves the next octave is heard. When the damper is off, the string which represents the same pitch as this overtone (an octave above the sounded tone) will vibrate sympathetically. When the string vibrates in thirds, the twelfth (fifth above the first octave) is heard. Similarly, the string which has the same vibration-rate as this overtone will vibrate if the damper is off. When the string vibrates in quarters, the second octave is heard.

The initial tone (sometimes called the first partial) and its octaves will occur in the following order in this series formed by the initial tone and the ensuing partial tones: 1-2-4-8 etc. The fifth (the fifth above the first octave) will occur as follows: 3-6-12 etc. The third, first heard as the fifth partial in the series (a third above the second octave of the initial tone—sometimes called the fundamental tone), will occur in the following order: 5-10-20 etc. The ratio is always one to two.

A tone is composed of the initial tone (represented on the piano by the key that is depressed) and the sum of all its overtones, or partial tones. This is so whether the pedal is used or not, but the

effect is magnified by the pedal. Below is an initial tone and several of its partials.



The partial tones nearest the initial tone will be the strongest. These stronger partial tones will immediately begin to generate their own series of partials, acting as initial tones themselves. The longer the pedal sustains a deep bass tone, the richer it will sound because of its partial tones and the partial tones that continue to be brought into existence by relationships that are constantly being formed.

The relationship between tones does not only work in an ascending fashion. A tone has related tones above it and below it. Low tones have more related tones above, and high ones have more related tones below. The tones in the middle register of the piano are the finest tones when the pedal is used because there is here the closest approach to perfect symmetry; that is, there are as many related tones above them as below them.

Try the following experiments:

Depress middle B flat silently, and then sound lowest C heavily. Use no pedal now. Stop the vibration of C by removing the finger from the key which

permits the damper to fall on the string. The B flat will sound clearly. This is because that particular B flat belongs to the series of overtones generated by the C. When the struck string divided, that portion of the string that corresponded to the vibration-rate of the B flat began to vibrate and this caused the B flat string to vibrate also.

One instrument can vibrate in sympathy with another. For this reason the pedalling of a two-piano team must be carefully worked out together. If there is access to a two-piano studio, try the following experiment: Have the damper pedal on one piano depressed. Have a chord sounded on the second piano staccato. The chord will sound from the first piano. (The phenomenon of some object in a room vibrating sympathetically with a tone produced on an instrument is a common experience to all.)

Depress a bass C silently. Strike the octave above it. This sounded tone will continue to sound from the string below; the higher octave will sound from the lower string vibrating in halves.

Depress a bass C silently. Sound the C major chord two octaves above it. The entire chord will sound from the lower string. This proves that the string vibrates in divisions simultaneously. When a string is free to vibrate, the vibration of any related string above it will cause the first string to vibrate in divisions that are related in vibration-rate to this higher pitch.

CHAPTER XI

PEDALLING

(Continued)

TEMPO AND PEDALLING. (Slow Practice.)

We have already treated the employment of the pedal in legato chords at both slow and fast tempos. We may state the following general rule about pedalling in relation to tempo: the slower the tempo, the more offensive is the over-use of the damper pedal.

The use of the pedal at a slow tempo brings us to the problem of pedalling during slow practice. Since over-pedalling is more offensive in slow playing, how is one to treat the pedal during the early, slow practice periods? If the piece is an andante or an adagio movement, there is usually no cause for any extra concern. There is a problem, however, when a fast composition is to be practiced slowly.

There are three possible treatments. They are:

- (1) The pedal may be omitted until a faster tempo has been reached.
- (2) The pedal may be employed as it will be finally.

- (3) Less pedal may be employed, adding more of it as the tempo is gradually increased.

It is generally accepted that the pedal should be used as soon as the piece is begun. It is best to delay nothing. That leaves us a choice between (2) and (3). The register of the piano being employed and the character of the music being performed will help direct our choice. From a psychological point of view (2), "the pedal may be employed as it will be finally," is the better of these two choices. But if this results in a bad blurring of the music (and this is where the register of the piano and the character of the music lend their influence) then (3), "less pedal may be employed, adding more of it as the tempo is gradually increased," is the better treatment.

EFFECT OF PEDAL ON REGISTERS.

The damper pedal affects the music less and less as one moves over the keyboard toward the highest treble region. The effect increases as one moves toward the bass. Therefore, when tones to be pedalled are in the bass, less pedal should be employed, and greater care must be exercised to avoid wrong pedalling which will be very noticeable.

PEDALLING A THEME.

Never combine thematic tones with the pedal. One may use the pedal to connect one thematic tone to another, but it must be changed upon striking each new tone. Clarity in the enunciation of a new theme

is so desirable, that it is well not to employ the pedal, if the legato is not dependent upon it.

EFFECT OF PASSING NOTES.

The use of the pedal during a series of staccato tones is at most times not permissible. However, at times it may be necessary to use it for an important reason. It may be employed to connect deep bass tones to following chords in spite of the presence of staccato tones in the treble.

Sometimes the pedal is employed with a series of staccato chords, producing a distinctive effect. The staccato marks in this case serve practically as delicate accents.

Poor editions cause much confusion. Pedal marks and staccato marks are often found together where there should be either no staccato marks or no pedalling. The teacher should avoid these poor editions. All editions should be re-edited by the teacher.



SPECIAL EFFECTS.

A very attractive effect is produced by releasing the pedal after coming to rest on a chord at the end of a passage which was performed with the pedal.

There are other special effects requiring execution by a very excellent pianist, but these are of very little importance in every-day teaching. There are, of course, specialized books on pedalling, such as Lindo's, which discuss this phase of pedalling (and

all others) very fully. The mention of a few more effects should be ample for this essay.

A music-box effect is obtained by permitting the blurring of harmonies in the high treble region.


In the essay on overtones the experiments called for the silent depression of certain keys. Special effects may be produced by silently depressing certain tones, either as a chord or as a broken chord, while the other hand is executing a passage. No pedal need be employed. But the pedal may be employed and then released while the silently depressed keys are held down with the hand. Silent pressure is indicated as follows:  or 

MARKINGS FOR THE DAMPER PEDAL.

The marks for the use of the damper pedal are almost always inadequate. In many editions they are completely unreliable. This necessitates much annoying alteration. And where there are no pedal directions, the teacher should supply them accurately and clearly.


When the system of marking the pedalling is Ped. for its application and an asterisk (*) for its release, it will always erroneously seem that there must be a break between the time the pedal is released and depressed again.

Its use is better indicated by a straight line under the bass with two short horizontal lines at either

end to show exactly where to depress and where to release the pedal (). The line indicating release may, in this system, coincide with the line indicating its subsequent depression, because of the speed with which the pedal may at times be changed (released and applied again).

Some modern composers are very careful about the markings on their compositions, because the pedal is so important in their style of composition. Instead of the ordinary markings one may meet such expressions as: *Enlevey la sourdine*; *Ped. a chaque temps*; *Gardez la pedale*; and *Laissez vibrer*.

HALF-PEDALLING.

In half-pedalling the pedal is changed, not completely, but partially. The vibration of the string is thus not entirely stopped but merely checked by the partial release of the pedal. This use of the pedal requires more skill than ordinary pedalling. Young pupils will not meet it frequently. It is indicated as follows: . Another way of indicating half-pedalling is: *Ped. . . . 1/2 . . . 1/2 . . . Ped. . . . 1/2 . . . 1/2 . . . etc.*

UNA CORDA PEDAL.

The words “*una corda*” mean “one chord”, or “one string”. The reason for naming this pedal with these words will be seen in the following explanation. When the *una corda* pedal is depressed, the

entire action of the piano is moved a very short distance to the right. The result is that the hammers will strike two strings instead of three in the treble, *one string* instead of two in the middle region, and in the bass the strings will be struck on the side rather than squarely. The string that is not struck (in the middle and treble regions) will vibrate sympathetically. This is what causes the characteristic tone-quality (slightly veiled and reedy) produced by the employment of the una corda pedal.

This pedal has been called the soft pedal, but this term does not describe it completely. True, it is of assistance in the production of a very soft tone. However, this pedal not only weakens the tone, but gives it a slightly veiled and reedy character. It may be used whenever the music demands a softening plus the slight change in tonal quality. It should not, however, be used every time a soft tone is desired. If the desired softness can be produced by the fingers alone (that is, without the aid of the una corda pedal) then the una corda pedal should not be used. When a tone softer than the fingers can safely produce alone is desired, the soft pedal should be employed.

Its use is indicated by the words "una corda", or by the abbreviation, "U. C.". When the damper pedal and the una corda pedal are both to be employed the term "2 Pedales" may be used. The use of the una corda pedal is not always indicated.

THE SOSTENUTO PEDAL.

When keys in the middle of the piano are depressed and the middle pedal is then pressed down, this pedal acts exactly like the damper pedal, but for those tones only. It is really a supplementary damper pedal. (Some pianos do not have this pedal.) The tone must be produced first, held by the hand, and then caught by this pedal in order that it shall be successfully employed. Other tones produced while this pedal is down are unaffected by it.

The use of this pedal enables one to retain certain tones with the foot, leaving the hands free to execute, for example, intricate passage work in the treble region without the blurring that the use of the damper pedal would cause.

The use of the sostenuto pedal is indicated by the words "Sostenuto Pedal", or by the letters "S. P.". Similarly to the una corda pedal, however, its use is most often undirected. Sometimes there is a choice between the damper pedal and the sostenuto pedal. This choice will be a matter of individual taste. Benno Moiseiwitsch says, ¹"The third pedal? No, I never use it. I really see no use for it at all, for I can make all the effects I need with the two pedals."

RÉSUMÉ.

Outside of key manipulation, only through pedalling can one affect the quality of tone. By means of

¹ In Harriet Brower's *Modern Masters of the Keyboard*: Stokes.

it one can sustain and color the music. The employment of the pedals must be judicious: the chief danger lies in its constant and indiscriminate employment. Even Hans Schmitt in his book on pedalling gives one the impression that the pedal is to be used as often as possible. This should not be the case. One should have a good, clear reason for the application of the pedal.

Whenever it is impossible to connect with the fingers the damper pedal may be employed, that is, if legato is desired. Its use also enriches the music because of sympathetic vibration. For this enriching effect the pedal may be used even though the fingers themselves can adequately connect the tones. The damper pedal can be used to give a slight emphasis to the rhythm. The tempo and the presence of passing notes affect its employment. Generally, a slower tempo demands less pedal, as does the presence of passing notes. The lower the location on the keyboard, the more objectionable is over-pedalling.

The teacher must clarify the use of the pedal by clear markings on the score and by illustrations at the piano, accompanied by sufficient information. With proper instruction even a young pupil may use the pedal to enrich his simple music.

The *una corda* pedal and the *sostenuto* pedal have highly specialized uses and should not be employed unless there is reasonable assurance that their use is warranted.

Part IV:
RELATED ESSAYS

CHAPTER XII

SLOW AND SEPARATE-HAND PRACTICE

SLOW PRACTICE.

A new composition should be begun as slowly as possible without, of course, losing the sense of the composition. Slow practice without concentration (if at all possible) would not be very useful.

Slow practice aids all the elements that finally lead to the complete memorization of the compositions being studied, intellectually and muscularly. Its value is not only physiological, but also psychological.

Slow practice affords the pupil eye-training. It enables the pupil to learn how to focus his eyes on the printed page and on the keyboard. It will improve his sight-reading ability, which is so dependent upon his vision.

Slow practice permits concentrated listening, which is of great ear-training value. It aids in the development of musical imagery. The pupil can, when working slowly, predetermine the exact quality and duration of the tone he wishes to produce, and he can

also determine the exact manner of manipulating the key. In this way wrong key-hitting is reduced to a minimum; errors are practically eliminated.

Slow practice tends to make the pupil's work more scientific. It works like a magnifying glass, exposing wrong and non-essential movements at the keyboard, many of which lead to wrong notes. Slow practice exposes like slow-motion films.

It is the best preparation for fast playing, but is, of course, no substitute for it. As the pupil becomes more familiar with the material the tempo should be increased. Finally he should play at proper speed, although he should always return to a slower tempo occasionally. In this way errors which may have crept in will be discovered and eliminated, and impressions that have become hazy will be strengthened again.

Some students will play accurately at a slow tempo and then, when the tempo is increased, mistakes will creep in. These errors are caused by increased speed—by nothing else. The pupil should practice slowly until an increase in tempo does not produce mistakes. If mistakes persist at a fast tempo it means the pupil is not capable of such speed at that particular stage in his learning.

Slow practice is part of the remedy for almost all sorts of pianistic ills. Without it most difficulties could not be completely and successfully overcome at the piano. Of course, slow practice, to help remedy

anything, must receive intelligent guidance—the problem must be fully understood.

With young pupils slow practice is a physiological necessity. They must be permitted to complete one action before beginning the next. This avoids contrary exertions which will result in stiffness. Permit any pupil to sight-read his new material quickly and the necessity for beginning work very slowly will be plainly evident.

Only through this slow procedure can a solid foundation for correct style be built. And only through slow practice can an inferior style of playing be changed into a superior one. Slow practice permits a greater degree of relaxation, and from this greatly relaxed state we can proceed to build up correctly coördinated movements. We are supplied with sufficient time to perform correctly.

Slow practice is far less fatiguing than fast practice, and, although fast practice must not be forsaken entirely, the conservation of energy is important. Muscular reactions are different in slow playing than in fast playing, but still we can approach the necessary muscular coördination required in fast playing by beginning slowly, and gradually increasing the tempo.

SEPARATE-HAND PRACTICE.

Do not make separate-hand practice a matter of daily routine. Only use it for a specific reason. As has

been stressed in *The Procedure at the Piano by Note*, Chapter V, the first step should be sight-reading. If there is a cause for separate-hand practice it will be found after the pupil has read the music as an entirety at least several times.

Separate-hand work will more likely be induced by music of contrapuntal character than any other kind. But even here, as soon as each separate voice is emphasized sufficiently (always bearing in mind its surroundings—its location in the composition), separate-hand work should cease. Separate-hand work may also be resorted to when it is desired to practice an oft-repeated figure until it becomes almost automatic. In this way we are making a stronger appeal to the sense of motor memory.

Memorization is most reliably secured by playing the composition exactly as it should sound when finished, except for the necessary sacrifice in tempo at the beginning. Separate-hand work very often causes false associations to be formed, which later have to be broken down when two-hand associations are being formed. In this respect the situation is similar to the part learning of a poem as explained in *Whole versus Part Method*, Chapter IV.

Pupils will invariably find that after practicing with separate hands they will experience difficulty when they attempt to play with both hands. Even texts that prescribe this kind of practicing admit this deficiency in separate-hand practice. But they say

no more about it. The difficulty is due to the fact that separate-hand practice will not develop the coördination necessary for skillful two-hand work.

A piece for the very young beginner will be too simple to require separate-hand work. In fact, most of the very simplest of pieces are melodic only, and this melody is divided between the hands. Separate-hand work is valueless here. And as this very young pupil develops and his material grows more difficult, he has also grown in skill and should not have to resort to separate-hand work, except when such procedure is clearly desirable.

Students must not be told to practice a new piece with separate hands. Two-hand work from the beginning of study to the completion of the memorization produces more efficient thinking, which will continue to make separate-hand practice less necessary, less desirable, and of assistance only occasionally.

CHAPTER XIII

SCALES

SCALES. (Exercises.)

Oh, the number of pupils who practice scales daily and have no repertoires! Oh, the number of pupils who practiced scales slavishly, and then gave up the study of music to repent the hours spent on drudgery rather than on attractive compositions of merit! Harriet A. Seymour says:¹ "Of the thousands who have taken music lessons for a year or more and then stopped in disgust 90% will tell you that finger exercises and scales made them hate music."

Scale practice, as a separate division of piano study, should be dispensed with. This does not mean that scales should never be practiced. They will be practiced when and where they are met. Preparation for difficult scale playing as found in difficult pieces is best accomplished by the study of less difficult pieces containing less difficult scale work. All in all, scales are seldom found in the majority of compositions, and when they are, they are seldom very extensive. *Scales are rather to be understood than practiced.*

¹ *What Music Can Do For You*: Harper.

The use of scales as a foundation for technique is difficult to understand, for scale work demands the constant employment of the strongest fingers, and the weakest ones are used very little. Where then is the foundation for technique? A better foundation exercise would be one employing the fourth and fifth fingers mostly. But, actually, one need not worry about gaining enough strength for technical needs. One usually has enough to begin with. It is the correct use of one's muscular energy that is of greater importance.

The best preparation for *any* technical demand, lies in the development of the proper style of playing plus an excellent practice procedure. Most difficulties are caused by an inferior style at the keyboard, by a wrong manner of attempting to play certain passages.

When scales are practiced separately they lose all musical meaning to the pupil, whereas when practiced in compositions they will have musical meaning—most of the time. However, to repeat, difficult scale passages are not frequently met in pieces of average difficulty. They are more frequently met in concertos and in works of similar nature which the average pupil never reaches.

Beautiful piano playing does not depend upon the ability to play scales up and down the piano, no matter how well that is done. There are a hundred and one technical problems left unsolved by scale

work. Why then stress the latter? Technique is best acquired by applying sufficient energy to the study of a great variety of excellent compositions, forming from them a worthy repertoire. In this way one makes sure of meeting and conquering many more of the hundred and one problems. You will also meet scales, and when you do, practice them carefully and diligently as you would the other problems. To repeat, style and practice methods are of the greatest importance. It may require a technique of a higher order musically to play a slow piece containing no scales than a fast piece containing showy passages.

It is often said that scale playing brings about great familiarity with the keyboard, that it enables one to discover appropriate fingering at sight. Nothing can possibly bring about as great familiarity with the piano as a varied repertoire. As for fingering: fingering is not always the same—each composition will indicate its own fingering.

Everything said about scales is meant to apply also to arpeggios, chords, trills, etc. If a composition being learned contains arpeggios then arpeggios will be practiced, not as a mechanical exercise, but as part of a meaningful composition. A composition containing simple trills can serve as a splendid preparatory étude for more difficult trills, if such a preparatory étude is necessary at all.

According to Harriet A. Seymour: "Another

valueless technical practice is the repetition of one figure, either scale or phrase. . . . A few vital things really understood and thought about are worth a hundred books of exercises gone through mechanically. The latter is simply a waste of time."

Harriet A. Seymour also says: "Too much technique given too early either kills the love and desire for it or it develops a person to a high standard; this is only useful to those who are to be professional musicians. With children it is often better not to do any technical work at all for several years."

Harriet Seymour, we presume, means technical work as such only. She will probably admit that quite a good deal (if not a great deal) of technique will be acquired through the musical study of compositions without stressing the technical side of them at all.

Technical problems should be solved as they are met. This is a very practical procedure. The pupil will work far harder on a current difficulty than in preparing himself for a later one.

"What," one may ask, "what about the more talented pupil? Are we to avoid technical work as a separate activity, and run a chance of ruining this pupil's success as an excellent pianist?" The answer is still the same: under no condition should technical work be a thing unto itself. Technique means the ability to produce the appropriate tone-qualities with ease, whether the piece is of a showy nature or

not. Technique includes musicianship, something not acquired by the mere drilling with exercises. With the more talented pupil use compositions of a more technical nature, introduce them sooner, and use many more of them. Technical materials are necessary in order to acquire a familiarity with technical problems. But the very best technical material is found in the very best compositions.

Some very excellent pianists think scale playing has been overdone and overrated. There are others who think them indispensable. The fact that there are differences in opinion proves that there is some doubt as to the value of scale-playing. Among those who do not think them necessary are educators of the broadest kind who are applying their broad knowledge to the specific field of musical education. Many pianists could have done without drilling at scales and could have become just as good pianists; only, of course, they do not think so, having been made to think that scale-playing was so necessary during their years of study. If they could go back and work all over again without separate technical work, like scale-playing, then we would surely know how important this type of practice has been for them. One pianist tells how he conquered all the scales in thirds, sixths, etc., in six weeks. How badly could he have needed them? Had he not practiced them for those six weeks would he have failed to become the same excellent pianist?

To repeat an important point: there must be no misunderstanding—there should be sufficient technical work. This technical work, however, should consist of learning how to play beautiful compositions. A teacher depending on worthy compositions for all technical work will seek the proper materials for this type of teaching.

• Teachers must avoid the training of unbalanced performers, performers who seem quite skillful in the manner in which they run over the keys, and yet cannot hold the attention of listeners because of the lack of tonal variety in their playing. Tonal variety makes expression.

Emil Sauer says:¹ “There comes a time to every advanced pianist when such exercises as the scales, arpeggios, and the studies of Czerny and Cramer are unnecessary. I have not practiced them for some years, but pray do not think that I attempt to go without exercises. These exercises I make by selecting difficult parts of famous pieces and practice them over and over.” These exercises “I can practice without the fatal diminution of interest which makes a technical exercise valueless.”

Why cannot even a young pupil adopt Sauer’s method? Indeed, this is the very method that modern piano teachers should prescribe.

How many pupils have practiced Hanon and yet have terrible hands and fingers! Why? Because they

¹ In *Great Pianists on Piano Playing*, James F. Cooke: Presser.

did not employ the proper style of playing which develops healthy hands and fingers. Merely doing technical work is no guarantee that the proper style of playing is being correctly developed.

Harold Bauer turned from violin playing to piano playing rather late in life. He did not have time to devote to scales and exercises. He used his concert material as technical material, an excellent procedure for anyone, concert artist or pupil. Rosenthal does not believe in the efficiency of scales, one of his reasons being the unequality of finger employment. We have already alluded to this.

As for table exercises: do not use such exercises as preliminary work for beginners. Do not use a silent clavier. Let all work be done at a live keyboard, technical work has no meaning without tone-production. If the pupil is ready for piano lessons, let him begin playing at the piano at once. What satisfaction can a pupil derive from raising and lowering fingers at a table? Besides, the pupil will not raise and lower his fingers the same way at the keyboard where he should employ the non-percussive touch mostly. Whatever value can be obtained at a table can be still better obtained at the keyboard!

In conclusion we quote from Thomas Fielden:¹ “. . . Technique can be a purely natural, not an artificial matter . . . It can be achieved, not by mechanical grinding at finger and arm studies, but by the

¹ *The Science of Pianoforte Technique*: Macmillan.

application of physical and mechanical laws to those studies."

If the words "to the study of excellent compositions, which are valuable both technically and musically" are substituted for Fieldon's last words, "to those studies", then the quotation will completely coincide with the view-point of this book. Technique means the ability to produce appropriate tone-qualities with minimum effort. To do so two things are required above everything else: (1) a knowledge of the laws that govern the piano (which is a machine), and the laws of the human body applicable to piano playing (physiology); and (2) the development of the power of musical imagery which is needed to guide the successful production of the appropriate tones. Therefore, to obtain technique requires the knowledge of certain laws and their application to the performance of excellent compositions. Only in this way can one develop the power of musical imagery to a satisfactory degree.

CHAPTER XIV

NOTE-READING AND SIGHT-READING

FINGERING—VOCABULARY

NOTE-READING.

It is not necessary that the pupil be able to read notes at the very beginning of music lessons. Unavoidably a little note-reading is always done, but no stress is laid upon its importance. Start with what the child can already do. He can hear; teach him to listen. He can remember; teach by rote—start with his ear memory. (See Procedure at the Piano by Rote, Chapter V.) Ear-training is far more important than note-reading. Besides, the youngest pupil will learn to read by experience, gradually but surely.

Older beginners may be taught notation from the very start. But never give them the impression that it is all-important. And do not attempt to teach all the facts of notation at the very first lesson! Note-reading should be considered the simplest phase of piano study. However, this does not mean that it should be neglected.

Use no keyboard charts! If a book contains one, rip it out! If it is used, the pupil becomes accustomed

to this prop and when it is removed the pupil's ability to read is most often removed with it. The pupil should require very little assistance in learning to read music. To learn the names of the lines and spaces and to learn to read notes written upon them should certainly not be a tremendous task.

The old method of giving names to the lines and spaces is not objectionable. The student must know, however, that these sets of letters and names mean absolutely nothing musically. They are used to build up associations. The lines in the G clef may be called "E-very G-ood B-oy D-oes F-ine". The spaces in the G clef form the word "F-A-C-E". In the F clef the lines may be called "G-ood B-oy's D-o F-ine A-lways," and the spaces may be called "A-ll C-ows E-at G-rass."

The pupil should know his music alphabet ascending and descending (ABCDEFGG-A and A-GFEDCBA). The alphabet by thirds is very useful in reading notes on leger lines and in reading chords (A-C-E-G-B-D-F-A etc.). The pupil should be able to begin this alphabet on any letter, and go in either direction. The four sets of words in the previous paragraph (associated with the lines and spaces) are all contained in this alphabet by thirds. In the early teaching of notation stress the location of middle C in each clef and G, second line G clef, and F, fourth line F clef.

Some pupils will read notes as the teacher points

to them, but fail to read them when they play without this assistance. The failure is probably due to poor concentration, and the inability of these pupils to focus their eyes properly without this assistance. The teacher should continue his assistance, showing the pupil exactly how to focus his vision. The assistance should gradually be lessened until the pupil has been trained properly in the use of his eyes in note-reading.

In music reading the pupil should be asked to read by phrases. This develops greater speed. Of course, efficiency will not be obtained at once. The pupil cannot read long phrases at first. However, the teacher can always urge the pupil to see groups of notes, and if the pupil cannot name these notes quickly he can at least note the general direction of the notes.

“In dealing with reading, the most central point to have in mind is that reading skill depends upon proper eye movement. . . . Proper eye movement depends more upon proper comprehension than on any other one thing . . . The kind of reading habit we wish to *avoid* is where the pupil looks at each note separately, and then makes the adjustment needed to play or sing it, and then looks for the next, etc.” (Mursell.)

As has been stated in Mental Rehearsal, Part I, the score should be read away from the piano, that is, when it is not being played. This should aid in the

development of the ability to "hear with the eyes".

An important question arises, "What is the proper place of the score in the study of music at the piano?" According to Mursell, (*Human Values in Music Education*: Silver, Burdett) some teachers make of the score what is nothing less than a fetich, working on the assumption that teaching music means teaching how to read the notation. The value of music does not depend upon note-reading, the value lies in the music itself. The score is, nevertheless, very important if used properly for its true value. Each form of memory works with and aids each other form. The use of the eyes in reading the score definitely aids the auditory impressions, and also the motor impressions. The use of the score aids in performance and in listening. The mastery of score reading, however, is not the chief aim of music education.

SIGHT READING.

Good sight-reading requires an experienced knowledge of notation. The proper manner of beginning to practice a new composition (*slow* reading of the composition from beginning to end *with both hands*) develops good sight-reading.

In sight-reading as in good practice the fingers should find their keys before any attempt is made to produce tone. The two actions may be continuous, but they must be separately conceived mentally. The performer must not remove his hands from the keys

previously played unless absolutely necessary. He should use one position on the keys or immediately over the keys to help him find the next position.

If one must sight-read a composition at its proper tempo it may be necessary to make some rather harmless alterations (like an omission that will not be heard clearly) in order to be able to maintain the correct tempo. Generally, sight-reading should be a little slower than playing a thoroughly learned composition, but in case one is asked to sight-read in ensemble these alterations may be necessary. Some will call this "bluffing", but this bluffing may be necessary and one should exercise skill even along this line.

The ability to sight-read well is invaluable. It makes the first step in practice easy and efficient. Pianists, professional and amateur, are often called upon to sight-read and are expected to do so satisfactorily. One may be asked to accompany, or even sight-read a solo.

One must, when sight-reading, observe the clefs, the key-signatures, the time-signatures, the tempi, and all the marks of expression. In sight-reading it is necessary to keep the eyes on the printed page considerably. However, an occasional glance at the keyboard is absolutely necessary. One cannot rely totally, especially at first, upon one's muscular sense for distance, except small distances up to an octave. But with enough experience one's muscular sense becomes

highly developed so that in future sight-reading one needs to look less at the keyboard.

In sight-reading, as in all musical functions, the ear plays an important part, as do motor responses. But the function of the eye comes first. Poor sight-readers will often be found to have defective vision.

Some teachers favor the use of the metronome with the pupil's sight-reading. The unceasing tick of the metronome will harm the concentration rather than assist. If a pupils falls behind the metronome for a fraction of a second he becomes nervous and probably blunders in trying to catch up. When the metronome is not used the pupil may slightly retard the tempo at a difficult place and then resume his original tempo without any harm.

A certain amount of counting must be done even when sight-reading. Accents should be stressed, and phrasing accomplished. Like every other activity, sight-reading will seem to be a knack with some pupils. But it is a knack that can be developed and it certainly should not be neglected.

FINGERING.

When a student is taught to read music, he must be taught to see everything on the printed page, not merely notes. He must see every mark of expression. He must see the fingering.

The teacher should check up on the fingering of each composition for each pupil. He should choose

the fingering that allows the greatest ease and smoothness in the rendition. Do not use complicated fingering where it is not required, where easy fingering will suffice.

On the other hand, fingering which at first may seem difficult and even unreasonable should not always be avoided. This difficult fingering may prove its worth after one is used to it. The teacher should carefully decide the choice of fingering.

Select fingering that permits the pupil to prepare as large a group of tones as possible. Do not avoid fingering that seems to put a burden upon the fourth and the fifth fingers if that fingering meets with the requirements better than any other. These so-called "weak fingers" are not weak if used non-percussively.

The teacher must be an expert editor of music. He must supply good fingering where there is none and improve bad fingering. He will have to alter fingerings at times to fit a particular pupil's hand. There are individual variations.

Fingering by great pianists will usually be unsuitable for pupils, especially young pupils. This is because, in the first place, the great pianist usually has a very large hand, larger than the average pupil. Secondly, fingering which may seem easy to the pianist will often seem very tricky, unnecessarily so, to the pupil. This fingering is better simplified. Too often editors will finger a composition forgetting that young pupils may be expected to play them.

Although the reading of fingering is part of the note-reading activity, the choice of fingering is a keyboard problem. Fingering should be tested at the keyboard.

VOCABULARY.

Much time can be saved, and much energy conserved, if the pupil will acquire at least a fair command of the language of music. The least the pupil can do is have a music dictionary handy at all times when at work. Some compositions have glossaries prefixed to them. This is a most excellent idea and should be more extensively employed by publishers.

Very often a pupil will play a part of a composition contrary to the composer's intentions because he did not know the meaning of the directions which are so carefully placed upon the page. Most of these directions are oft-repeated and it should not be a difficult task for the pupil to acquire their meanings permanently. He need not be a linguist! The teacher is often kept busy giving the pupil directions that are clearly indicated on the printed page.

The pupil must acquire a music vocabulary. He must seek to constantly increase it. He must learn the language of music. Words are necessary for thinking. To think adequately about music requires a knowledge of the language of music.

CHAPTER XV

EAR-TRAINING AND HARMONY

EAR-TRAINING.

Ear-training is a method of training a pupil to enable him to recognize, classify, and to remember musical tones by the way they sound. Actually it is not the training of the ear, but mind-training through the ear. The ear, itself, is not changed. The pitch discriminating mechanism in the inner-ear cannot be changed by training. (The essays on Pitch and Auditory-Memory in Chapter II will be recalled in this connection.)

Ear-training aims at the development of auditory-imagery and auditory-memory. And, as has been stated before, imagination is a form of memorial functioning. Ear-training, therefore, resolves itself into memory training. It supplies one with useful information, with tags that help one recognize certain auditory impressions, classify them, and recognize them, when met again, with greater ease. Intervals are sorted and named; tonalities are examined and described. The use of syllables is recommended.

The sense of pitch can only be improved up to one's

physiological limit, and that limit is only reached after extended hard work. Accompanying the training for pitch discrimination should be the training for recognition of tonalities. This is training in auditory perception.

Rhythmic ear-training helps the development of the memory for rhythmic patterns, and encourages a quicker response to rhythm. The rhythmic sense is not entirely auditory, but it can be educated through the ear.

Ear-training should endeavor to make a pupil his own critic. He should learn to know what sounds well and what does not. According to Mursell, effective ear-training: “. . . consists in applying the known principles of learning to the particular field of musical auditory skill. We must decide what connections or habits we wish to have formed, and encourage the use and repetition of them, while avoiding and discouraging the use of wrong connections or habits. . . .” The musician (and, to some extent, the pupil) must seek to build up “. . . the power to grasp and utilize the tonal background or environment; the power to identify and recognize chords; the power to analyze chords into their constituent elements; the power to discriminate fine shades of timbre or quality; the power to hear and grasp melodic outline; the power of inner hearing or tonal imagery. To establish these is the aim of ear training.”

Without a sufficient amount of ear-training, tonal

impressions will be weak and will not last. The accompanying pleasure will be only momentary. Where there has been sufficient training, the impressions will be stronger and last longer. After sufficient training, one understands a musical message better than before such training, and records it so that it may be recalled at pleasure sometimes long after the first impressions were received.

The subject of ear-training requires a specialist. However, most often the only ear-training a pupil receives is administered by the private piano teacher who, it seems, must be a specialist in many fields! Too often the pupil cannot be persuaded to give enough time to this important activity.

Luckily some ear-training is unavoidable when methods are correct. Some of this training unconsciously takes place at lessons and during practice periods. Slow practice is valuable here. But the private teacher must furnish at least a little of conscious ear-training. Awakening the pupil to consciousness is the beginning.

Although pupils possessing naturally good ears can benefit by ear-training and should not neglect it, pupils with inferior hearing ability certainly need it much more. Piano students are at a disadvantage when it comes to ear-training because of the nature of their instrument. It is possible to find your tones without the ear because of the nature of the keyboard. This, of course, is not so on many other instruments.

In piano work there is a great danger of not using the auditory senses enough, and of relying too much upon the other senses. This should not be the case. There is, therefore, a great need of this awakening, a great need of some conscious ear work.

When an ear test is given to a pupil for the first time it should be a simple one. He must not be discouraged by undergoing difficult tests at once. Simple exercises will serve their purposes better than difficult ones for a long time. If a difficulty of inner-hearing can be helped at all, the chances are that a simple treatment will do it. Although response to ear-training tests should be prompt, the teacher must exercise patience at first.

Do not aim towards absolute pitch in ear-training, but rather establish the relationship between tones, their intervals. Recognition of tonalities should be stressed. It will be discovered that many pupils who have no trouble in naming pitch relationships in terms of intervals cannot name tonalities. It should take very little training to remedy this.

HARMONY.

It is a welcome relief to the piano teacher when the pupil has recourse to a class in harmony. However, if the pupil does not attend such a class, the private piano teacher must supply the pupil with a working knowledge of harmony, at least enough of it to assist the pupil in the analysis of his compositions for

greater appreciation and more reliable memorization. When the pupil takes but one half-hour lesson weekly this is a problem. If much time is spent on matters beyond the actual playing at the piano, and the learning of certain compositions is thereby delayed temporarily, the teacher is held to account for that! The teacher is advised to organize, if not a class in harmony, a general class where matters like ear-training and harmony can be given unhurried consideration without stealing time that is needed for actual piano playing and its problems.

Harmony and ear-training are closely related. Harmony is better taught at the keyboard where actual sounds are produced than on paper where they are not. Very few pupils can hear imaginatively what they write. If the pupils could hear imaginatively well enough, this process is better changed, and harmony should rather be taught away from the piano which is not perfect acoustically. However, to repeat, very few pupils have the ability to hear imaginatively. It is better to start out with keyboard harmony and, as the ability to hear imaginatively develops, to depend less on the instrument.

A good way to proceed is to instruct the pupil in melody writing and then to proceed to the harmonization of these melodies. Work on the part of the pupil should be permitted to be as original as possible. The ear should be the final judge. What sounds

right to the pupil is right unless the teacher can make the pupil feel it is not.

The subject of harmony, if carried far enough, requires an expert harmonist, something the teacher usually is not. However, the teacher need not be an expert harmonist in order to lay down some sort of harmonic understanding during piano lessons.

The pupil should be taught to name the keys at sight; he should learn about intervals and scale forms. Scales assume a greater importance in theory learning than in actual piano practice. The pupil should learn to recognize at least the principal chords in the pieces he is studying. This should not be entirely a matter of vision; the pupil should learn to recognize the principal chords and their tonalities by "ear". Notice the close relationship that exists between harmony and ear-training. The more ear-training there is in harmony-training the better. Harmony is what something sounds like, not what it looks like. Rules of harmony as they are most often taught will explain only the older music. What about "modern" music? Pupils must be told the historical place of certain rules that cannot apply to modern music, and need not apply to even the simple things the pupils will often write.

Given proper incentive the pupil may surprise with his musical creativeness. Encourage original work on the part of the pupil as much as possible, whether there are lessons in harmony or not.

CHAPTER XVI

RHYTHM AND TIME; PHRASING

INTERPRETATION—HISTORY

RHYTHM AND TIME.

Rhythm and time are not identical. Time refers to the grouping of the beats by twos, threes, fours, fives, etc. A time-signature of $3\frac{1}{2}/4$ time or $1/4$ time or any possibility is met occasionally in modern music.

Rhythm refers to the movement of the composition as a whole. It includes the arrangement of note-values (metre), the placing of accents, and resting. Since accentuation and resting belong to the art of phrasing, rhythm includes phrasing. The rhythm may follow the time of the composition or it may be against it.

In simple compositions the rhythm and time may be identical. That is, a composition may be in $3/4$ time and consist of three quarter notes to the measure. In this simple composition there will probably be no syncopation and the accents will probably fall on the first counts of the measures. Counting in this case will take care of both the time and the rhythm.

Counting is necessary; counting aloud is advisable

and practical. But counting a composition, excepting the most simple, will not insure correct rhythm. Counting should not be perpetual. The pupil must attempt to play in time and rhythmically by "feeling" the music. He should feel the length of a long tone, the strength of a strong tone, and the duration of a rest. Counting has its place and value, but it cannot be relied upon to accomplish too much.

The lack of a rhythmic sense in pupils is a troublesome condition to deal with. Sometimes poor instruction in the first stages of piano playing will cause a pupil to play unrhythmically. The muscular condition of the pupil must be closely watched from the very beginning. Rhythm is a muscular response and depends greatly upon coördination. Rhythmic difficulties are better treated away from the instrument by an activity permitting a free response of the whole body. The fact that the pupil must sit very still at the piano is a deterrent when trying to overcome a rhythmic weakness. However, troublesome rhythmic weaknesses will not be met often; practically every normal child possesses an instinct for rhythm strong enough to make musical performance successful as far as rhythm is concerned.

Rhythm demands the response of the entire body. It is something the pupil must feel muscularly, and not necessarily understand. Explanations can wait.

"The rhythmic interest of music depends very largely on the complex and changing relationship be-

tween the *Takt* [time] and the phrasing. Simple songs, marches, and dances ordinarily show a very simple and obvious rhythmic pattern with *Takt* and phrase corresponding. Syncopation is a device for enhancing rhythmic interest by directly reversing the relationship, so that the melodic rhythm opposes the *Takt* . . . The *Takt* is the basic rhythm, and about it the melody plays freely, now synchronizing with it, now departing from it . . .”

“In the olden psychological studies it was taken almost as an axiom that the rhythmic sense depended on the sense of time—that is, that our feeling of rhythm was essentially connected with our feeling of duration. And musicians commonly linked time and rhythm together on the assumption that they are almost identical. But one of the striking tendencies in more recent investigations of rhythm has been to show that the time sense and the rhythmic sense do not belong together in the way that used to be supposed.

“Rhythmic satisfaction and correctness positively does not depend upon uniform accuracy of timing. Temporary distortions may, and in fact do, exist without in the slightest degree affecting the rhythmic flow, which depends not at all on the sense of time, but on muscular coördination. Every teacher and musician should grasp this point clearly.” (Mursell)

Time may be said to be an orderly grouping of notes mechanically conceived for convenience. In some

modern music the time-signature and the bar have been eliminated. Rhythm, however, is fundamental. It is rhythm that gives shape and meaning to a series of sounds.

PHRASING.

Phrasing refers to the grouping of related tones, the separation of one group from another, and the treatment of each phrase not only as an individual phrase but also in relation to its surrounding phrases. Phrasing gives meaning to music in the same way punctuation gives meaning to literature; and wrong phrasing will corrupt music and distort its meaning just as much as wrong punctuation will do likewise to literature.

Phrasing includes accentuation, duration, separation (resting, or breathing), and influences to a great extent dynamics (fluctuations in intensity—in the degree of loudness), and agogics (fluctuations in tempo—in speed). Actually, it is the treatment of each phrase individually and in relation to its surrounding phrases that finally produces the total interpretation.

Each phrase has its own backbone. Some one tone is the principle tone and should be accented according to the quality of that part of the composition. Sometimes there are two such tones, either equal in accent or with one more important than the other. A tone in any phrase will be accented because: (1) it falls on

the accented beat of the measure (natural accent); (2) it is marked with an accent (regardless of its location in the measure); (3) it has greater duration than the other tones in the same phrase (a staccato tone may be made to seem longer by following it with an additional rest); (4) of its location in the phrase, usually its higher pitch, although sometimes the opposite is true (a large skip downwards in the melodic line may cause a tone to be accented); or because (5) of its importance created by any combination of the foregoing factors.

Phrases may consist of legato tones, staccato tones, non-legato tones, or of any combination of tones. The general rules of phrasing can be applied with but slight changes to the phrasing of any particular kind of phrase. The rules for accentuation remain the same.

By shortening the final tone of a phrase (unless marked otherwise) we affect a separation between phrases, which is akin to the vocalist's breathing between groups of tones. However, if the last note of a phrase is a very long one it will scarcely be shortened. If a fermata mark is over the last note, this note will not be shortened, but lengthened considerably according to the musical requirements. This will depend mostly on the tempo; the faster the tempo the longer the value of the fermata in ratio to the printed note. The rhythmic freedom introduced by the fermata mark permits equal freedom in deciding the

length of the pause which follows it, a pause that may not be indicated upon the score but which, nevertheless, should be felt between the phrases. (We are not speaking here about the fermata mark applied to a tone within the phrases.) In some compositions, like perpetual motion pieces, phrases may roll one into the next without any separation at all. The groupings will probably be indicated by accentuation and by dynamics and agogics. These variations in speed and intensity are called "nuances".

It was said that phrasing implies a grouping of related tones, and their separation and proper treatment individually and in relation to other phrases. For instance, a phrase may be a repetition of a preceding one, and the accented tone of one may be treated in a different manner than the other, the second probably being made softer than the first.

INTERPRETATION.

". . . There are eight factors entering into music: melody, harmony, tone color, dynamics, rhythm, tempo, form and nuance. With the form of a composition the interpretative artist has nothing whatever to do; that factor is in the exclusive province of the composer alone. The structure of a composition in its broader aspects have been determined once and for all by the composer, and it must in this respect stand forever as it left the composer's hand. But with the other factors of music the interpretative artist has

somewhat to do, and with some of them very much indeed. And four of these factors, tempo, dynamics, rhythm, and color, our system of musical notation is inadequate to designate accurately." (John Redfield.¹)

The performer, because of the inadequacies of musical notation, has to supply definitely while performing many things only hinted in the musical score. However, he is held strictly responsible for any liberties he assumes.

How is the teacher to indicate to the pupil the correct interpretation of a composition? Notation is inadequate. Certainly the teacher should play for the pupil and thus indicate in a practical fashion how the piece should be played. But what the teacher plays and what the student hears may not be exactly the same thing. A good procedure is for the teacher to conduct the pupil during the pupil's performance.

Actually there is no one exact way of playing any composition. This should be a welcome fact! The teacher need not insist on just such a rendition and no other. Although at times the teacher's directions for interpreting should be followed as exactly as possible, there are times when the student may be allowed some license. It is surprising to hear the nice things the student may often do if given the opportunity. After hearing many interpretations of the same composition by many excellent pianists the

¹ *Music: A Science and an Art*: Knopf.

teacher should resolve to allow the pupil much more freedom in this respect! Excellent pianists often do the very things that many teachers distinctly forbid their pupils to do. Of course, many times the teacher is right, for the pupil has not the experience of the concert pianist.

The teacher should guide and suggest, but allow the pupil a hand in the working out of the interpretation. The pupil needs advice on interpretative matters, but does not desire tyranny. Demanding a certain interpretation from the pupil will do him no good. Educate him to improve his interpretations. Start with what the pupil can do, with what he likes, and gradually improve his ability to do, gradually raise the aesthetic standard of his ideas.

MUSICAL HISTORY.

To understand a composer's music one must know something about the life of that composer. Surely the age in which the composer lived has a bearing upon his music. Ideas of a certain age, artistic and also economic and political, will leave their imprint on intelligent composers.

The piano teacher can hardly be expected to teach history at private lessons; he has more than enough to do already. Where the pupil makes no attempt of his own to discover things about the composer, the teacher must at least throw important light upon the composition being studied. A composition can quickly

be placed into its proper category and the pupil informed about a few salient facts. The growing importance of music study in most public school systems should eventually relieve the teacher of a few of his responsibilities.

CHAPTER XVII

MISCELLANEOUS

INTRODUCTION.

The most important factors involved in the study of music at the piano in the acquisition of technique and musicianship are:

1. Innate talent.
2. Memory-training.
 - a. Ear-training.
 - b. Eye-training.
 - c. Muscle-training. (This includes the style of playing.)
 - d. Theoretical knowledge. (Analytical memory.)
3. Practice methods.
4. Materials used.
5. Pedalling.
6. Time devoted to study.

Each of these factors has already been treated to some extent. Following, in this chapter, are a few miscellaneous, but pertinent, essays.

INNATE TALENT.

Some students show a greater capacity for music study than others. Whether we explain this capacity, or talent, by heredity or by very early environment, it is still a factor. Undoubtedly, many things that have been attributed to heredity are due to environment. The point is, however, that the pupil is as the teacher receives him; he has no control over the pupil's environment before then. This points to the advisability of beginning lessons as early as possible—so that the teacher may assist in building up a more favorable musical environment for the child.

WHO SHOULD STUDY MUSIC?

Regardless of the degree of musical talent a child seems to possess, or regardless of the fact that he may appear to possess no talent or interest in music at all, he is still worthy of music education. Scientific tests may be used and genuine musical talent may be discovered, but it is not so simple to discover and to state positively that a certain child has absolutely no talent and should not even attempt the study of music for amateur purposes.

According to Jacques-Dalcroze:¹ "There are many more musical children in the world than parents believe. A small child may take no interest in following a military band, and absolutely refuse to take piano lessons, and yet be not wholly lacking in musi-

¹ *Rhythm, Music and Education*: Putnam.

cal feeling. Musical aptitudes are often deeply latent in the individual, and, from one cause or another, may fail to find the means of manifesting themselves—just as certain springs flow underground, and are only brought to the surface after a stubborn pickaxe has opened up the way. One of the functions of education should be to develop the musical instinct of children.”

Only a sufficient number of lessons with an excellent teacher will indicate in a practical fashion whether or not a child can succeed to some extent or is doomed to utter failure. Occasionally, a parent will say, “My child will never be able to study music successfully; he is tone deaf!” Invariably the parent is wrong! The child is probably not tone-deaf. Tonal ignorance is another matter, and education can correct this to a great extent. The average child, with but few exceptions, has all the capacities, even those depending upon the sense of pitch, to insure successful piano playing.

WHEN SHOULD MUSIC LESSONS BEGIN?

It has already been stated that a child of two or three may carry a tune satisfactorily thereby demonstrating some development of ear-memory. Undoubtedly a child, by the age of four, may be ready for active piano lessons. He possesses complete physiological apparatus and mental equipment. The point is, is he ready to use them? Does he possess

the ability to listen attentively? This ability can be developed quickly.

Psychologists have been stressing the value of education during the very impressionable first years of a child's life. Early training of the auditory and motor senses is especially advisable. However, to successfully instruct a very young pupil the teacher must be a specialist. This teacher must be adapted to his work by training, and by an innate ability to "get along" with young children. Some advanced teachers may be fully capable with young children, but many of them do not have the slightest idea of how to treat them, of how even to talk to them. It takes a specially endowed teacher to teach young children so that the very impressionable first years are not wasted, but are utilized wisely for the benefit of the child.

Regardless of the age of the beginner, correct principles must be taught, and excellent materials must be used. Although beginners may be as young as four (or even three), it is never too late to begin if one merely wishes to learn to play well in an amateur fashion, for one's own pleasure mostly. Fortunately, this is usually the goal. The average child of five is usually ready for music lessons. Children of six, with rare exceptions, are definitely ready.

HOW MUCH SHOULD THE PUPIL PRACTICE?

The teacher should endeavor to determine how much a pupil should practice by applying the psy-

chological factors involved (Part One, Musical Memory) to each pupil individually. But there is often a conflict between theory and practice. Many pupils will not practice as much as the teacher thinks they should, regardless of reasons.

It will do no good to demand a certain amount of practice, if the pupil is definitely unwilling in this respect. Many pupils are unwilling to practice a great deal, but still, with a limited practice schedule, achieve some progress, and are happy at their work. If more practice is demanded, difficult situations will surely arise. It is better to train the pupil in efficiency, giving him practical directions, suggesting how to accomplish a distinct improvement during a relatively short practice period.

Concentration and proper methods of practice are more important than time itself, although time is not negligible. We have spoken about the value of repetition, saying there is no substitute for it, and repetition does consume time. However, a few thoughtful repetitions will secure better results than many thoughtless ones, and will remove the necessity of stressing the time element until it becomes a very unpleasant subject.

An important point to stress here is that the average child is quite busy with his school work, which he naturally places first in importance. It is too bad that the public school curriculum does not permit a greater amount of time for outside activities like

piano lessons. However, in spite of school work, and other interests, there is time for the child to make worthwhile progress at the piano.

Many pupils are unwilling to practice sufficiently because they are not interested. The cause of this disinterest should be discovered and remedied. The disinterest may be caused by poor materials, in which case the cure is, obviously, better materials. The pupil should be permitted to help choose his material. He must enjoy his material or he will not work. A composition should not be forced upon the pupil no matter how excellent it is. Select another excellent composition. Occasionally, it may be necessary to use an inferior piece to gain a pupil's interest. Sometimes, an increase in the amount of the material results in more practice.

Careless pupils do not enjoy practice. The careless pupil should be shown exactly how to practice slowly, carefully, and neatly. Cure the pupil of this carelessness and the problem will probably be solved.

The pupil with a clear goal before him will work better than the pupil without this goal. Although an excellent teacher may not be a great pianist, he must be able to play well enough to give the pupil a splendid idea of how a given piece should sound when finished satisfactorily. By being able and willing to illustrate any point at the keyboard, the teacher shows the pupil how to think better at the keyboard.

IN CONCLUSION.

There has been no attempt made in this book to give the teacher a plan or schedule for a series of lessons. It has already been stated that mental progress is neither tidy nor orderly, that problems are best solved as they chance to appear most significant. This does not mean that the teacher can have no objective, but he must be ready to change his plans as quickly as conditions suggest this change. He must, of course, be able to recognize such conditions.

A splendid course in piano playing results when the teacher gives the pupil a good procedure, a procedure that not only accomplishes the immediate aim, the memorization of the material, but will also tend to develop each phase of memorial activity to the greatest extent possible. This includes the building up of a proper style of playing (referring to key-manipulation and pedalling), and the development of the pupil's musical culture. Excellent material for both keyboard work and intellectual study is needed for this.

A course in piano playing consists of learning how to handle one's body properly at the instrument, and of the development of certain mental processes that are the controlling and governing factors. This involves ear-training and muscle-training. This involves the acquisition of many facts dealing with the instrument, the body and mind, and with music itself.

Part V:
MODERN MATERIAL

CHAPTER XVIII

MODERN MATERIAL

INTRODUCTION.

The selection of the proper piece for a particular student will always require considerable skill and a rather full knowledge of the literature of the piano. A teacher will spend a great deal of time acquiring a basic library to which he will add season after season. This goes on for years and the teacher still must continue to seek newer and better material.

A great deal of space has been given to the music of the past in almost every publisher's catalogue. And even present-day publications that follow old lines entirely have received perhaps more than enough attention. But very little space has been devoted (with some exceptions, especially certain European catalogues) to music that is "modern"—and also excellent.

Because of this, many teachers, desiring to use modern material, have had great difficulty in finding it. And those who would use modern music if they could easily find what they want, do not find it.

And those teachers who carry around unjust prejudices against modern music go blindly on their way uncorrected. The literature of modern music is entirely too obscure!

Of course, the most important of modern composers and their most important works have been given considerable attention in critical volumes. But these volumes do not bring to the teacher's attention lesser works by these composers and works by less known composers whose writings are of great value in teaching.

The value of a catalogue of modern music for the piano should be evident. The catalogue in this book is composed of compositions carefully selected from over twenty catalogues, American and European, many of which would have remained undiscoverable for the average teacher.

Only piano solos have been considered. No works that are merely technical have been included. There has been ample explanation of this attitude. Excerpts have been selected to show the content of some of these compositions as clearly as brief excerpts permit. Undoubtedly, these excerpts are too brief to show the structural design of any of these compositions. They can, however, to a limited and yet valuable extent, indicate the character of these pieces as regards the other elements of music which are discussed in the following description.

A DESCRIPTION OF MODERN MUSIC.

Modern music must not be considered as a separate art, but as an out-growth of former music. This growth was so rapid for a while that it left many behind, but, by now, many of us have had time to learn to understand it.

Darius Milhaud says:¹ "The tide of music ebbs, flows, turns, and swells again with a swiftness which disconcerts the hearer, always slow to accept a new idea. Instead of taking advantage of the flood, he watches it ebb without seeing it, and at the moment when it is spent and about to disappear, he wishes to halt it and keep it fixed for ever. He who listens to music should above all others, be indulgent and open minded rather than rebellious for in the end he will probably be wrong anyhow."

Henry Cowell says:² "It is a mistake to assume that all these modern materials are entirely new. Isolated examples are being constantly found to show the use of what we call new materials in the works of the old masters, some of whom, in their greatness, were able to fore-shadow the direction of musical tendencies. . . . However, if it is a fallacy to suppose that modern materials have sprung suddenly from nowhere, it is equally absurd to try to make out that

¹ *The Day After Tomorrow*, Modern Music Magazine: League of Composers.

² *New Terms for New Music*, Modern Music Magazine: League of Composers.

modern musical usage is not new. The materials of modern music have been presaged in certain singled out instances and nearly all the devices have been evolved through an expansion of well-known older materials but no listener can possibly confuse a passage in Beethoven containing a polyharmonic suggestion with the sort of polyharmony that is being written today.”

The success of the modern composition in pedagogy depends upon the teacher's ability to teach it, which in turn depends upon his ability to understand and perform it. The following essays show, very briefly, how various elements of music developed. They should aid the teacher's understanding of modern music.

MELODY AND HARMONY.

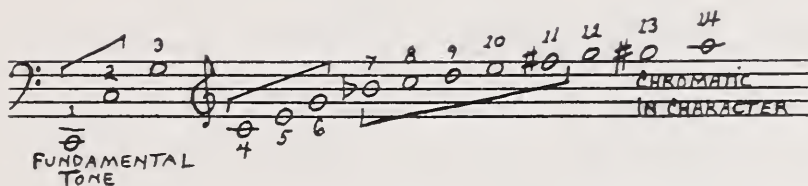
Although some modern music is seemingly lacking in melodic content, the typical modern teaching composition is not—it is frankly melodic. The melody, however, may not always adhere to previous conception of melody. There is always room for melodic invention. (The themes in the catalogue should be referred to.)

To show how our new harmonic ideas grew out of the older ones, we quote from Bauer and Peyser:¹

“First men and women singing in unison produced

¹ *How Music Grew*: Putnam.

music in octaves, 1 and 2 of the harmonic series.
[Below.]



“Next came the centuries of organum when parts were sung in fifths and fourths, 2, 3, and 4 of the harmonic series. Then followed the centuries of the major triad (c-e-g), 4, 5, 6, of the harmonic series. When the 7th overtone in the harmonic series appeared, we had the very important dominant 7th chord (c-e-g-b flat), looked upon as outrageous heresy and dissonance. It was years, even centuries, before it was admitted as a respectable member of the family! The 9th harmonic forming the dominant 9th chord (c-e-g-b flat-d) had the same hard row to hoe, and is one of our modern chords.

“We can trace the whole-tone scale of Debussy to the 7th, 8th, 9th, 10th, and 11th overtones of the series, (b flat-c-d-e-f \sharp). Scriabin’s ‘mystic chord’ is formed from the 8th, 11th, 7th, 10th, 14th, and 9th overtones (c-f \sharp -b flat-e-a-d). It is a short step now to polytonality and atonality, to Strawinsky, Schönberg, Milhaud, and Honegger.

“A single tone is the sum of its overtones and it is with these overtones that our modern composers are experimenting. Here we see that modern music

is the result of evolution (slow growth) and not revolution!"

ATONAL AND POLYTONAL MUSIC.

Atonal music is based upon the chromatic scale of twelve half-steps. Each of these tones in an independent centre. In "tonal" music there is but one center, one key-tone. And as Bauer and Peyser say, "This gives a more varied tonal paint box than the old diatonic modes and the chromatic scale of former days, for it has now become an independent family."

Arnold Schönberg is usually credited with having first employed atonality.

Cyril Scott says:¹ ". . . take . . . the question of tonality. At one time every composer, as all know, wrote in a certain key, only wandering from that key within a certain limited area, and always returning to that key at the end of the composition. Yet nowadays we ask ourselves: why limit our inspiration by this hampering fetter of key? why have any at all? or why not invent new scales, or regard the whole of tonality as chromatic? Thus some of us have abolished key-signatures altogether . . ."

On polytonal music, Bauer and Peyser write: "Having said that tonality is a system in which all tones gravitate to a central tone . . . it is not difficult to understand through the formation of the word poly—many, tonal—tones, that it means the use of

¹ *Philosophy of Modernism*: Kegan Paul, Trench, Trubner.

several keys or tonalities at the same time, a counterpoint of key against key, or scale against scale . . .”

It is no longer a rare experience to find treble and bass parts of even simple modern pieces in different keys.

“‘Polytonality’ refers to the placing together of music in two or more tonal systems (or keys) simultaneously, and to do this it is quite necessary to understand how to write music in each of the keys separately, as well as the additional problems involved in relating.” (Cowell.)

TIME AND RHYTHM.

In many modern compositions the time-signature changes very quickly, often in each measure. And the time signature may occasionally be $3\frac{1}{2}/4$ time or $1/4$ time. “Multi-rhythmic” is the term that has been accepted as representing this type of music. This is, however, a poor term for it. Time and rhythm are evidently being confused again. A better term would be “multi-time”. When time-signatures differ for each hand, and vary independently, the term should be “poly-time”. Instead of “poly-time” the term “poly-rhythmic” is often used. A bit confusing, perhaps, but “time” is not “rhythm”.

Time may vary without the rhythm varying. But where the rhythm varies rapidly with both hands playing in the same rhythm the term “multi-rhythmic” is correct. And when the rhythm varies

with both hands playing in counter-rhythm, then the term "poly-rhythmic" may be used.

STRUCTURE (Form).

Modern compositions which at first hearing seem lacking in structural design manifest this design to the listener only after several repetitions. But form it has, even though obscure. Modern compositions cast in new molds must not be thought to possess no form! Our concept of form has undergone a drastic change along with the other elements of music.

"Why should we endeavor to put new matter into old forms, as some people advocate, instead of creating new ones? . . . That it may be possible to put new matter—and by this I mean of course, melodies and harmonies—into an old form, one does not doubt; but when it comes to be regarded as a virtue, then the extreme danger appears. . . . The modern tendency, then, is to invent new forms or structural designs, more subtle, more mystical, more flowing than heretofore . . ." (Scott.)

DESCRIPTION CONCLUDED.

There are other elements of music that are very important in teaching. Sometimes in the less difficult of modern teaching compositions there is the illusion of virtuosity—often produced with the assistance of the pedal. It is a desirable quality. Teaching pieces are best, especially in the earlier grades, when they

are not as difficult to perform as they look or sound. The pupil is more gratified with the successful results secured with relative ease.

Humor is of frequent occurrence in the modern piece.

The beautiful variety of atmospheres painted by the modern composers was not possible before with the limited harmonic resources then available.

"We might successfully sum up the new music as an attempt to escape the obvious, to avoid time-worn combinations, to elide the unnecessary, to allow the mind to supply implied detail and to break down established boundaries not in a spirit of revolt but of exploration". (Bauer.¹)

According to Cecil Gray:² "The music of the last twenty years or so, whether that of Debussy, Stravinsky, Schönberg, or anyone else, despite all its appearance of novelty, is in reality only the last expression of expiring Romanticism which itself discovered no new continent, but only exploited and cultivated the known world to an hitherto unparalleled extent. It was a movement of expansion, enrichment, and colonization, as it were; the modern movement has been one of adventure and exploitation for their own sakes."

However, says Gray: "There has hardly been an

¹ *Twentieth Century Music*: Putnam.

² From *A Survey of Contemporary Music* by permission of the author and the Oxford University Press.

age in which there have been no great outstanding figures and there is no reason to suppose that our age is one of the rare exceptions."

Whether modern music is "The last expression of expiring Romanticism" or the beginning of a new music, it is part of the age in which we are living. We must heed this music, especially as teachers; we must listen to it; we must learn to appraise it for what it means to us as individuals and to music as an art (its evolution); we must do our part to aid its development. The more active one is in this development and the more one understands about it, the more favorable, the more fair, is the appreciation.

ON PERFORMING MODERN MUSIC.

The laws that govern the correct performance of modern music are no different from the laws that govern the correct performance of older music. However, because of the developments explained previously, greater care is needed for an accurate and satisfactory performance of this music, and greater care and efficiency is needed to gain its reliable memorization. The need for careful memory training becomes very clearly evident when one attempts to learn the more difficult of modern compositions.

Certain elements of musical performance at the piano become increasingly important in modern music. Chief among these is that of balance. By balance is meant the clearer and stronger pronunciation

of certain voices because of their greater importance, and the subduing of the other parts according to their lack of importance. This holds good in all periods of composition, but especially does the importance of this element of balance become manifest in modern music.

It has already been stated (Part III, Pedalling) that many modern compositions are at a complete loss without proper pedalling. The pedal may be employed to achieve glorious effects in modern music, more glorious than in old music, and its misuse is just as disastrous.

Some pianists, even when sight-reading, make modern music sound "right." They seem to have the right "touch" for it. Actually, they understand how to treat it. The rhythm is correct, with accents well-placed and carefully weighted, and the balance is sensitive.

On the other hand, many pianists, who are poor sight-readers of ordinary music, attempt to read modern music, do it poorly, and then discard it with contempt. And so another prejudice is born! And so another prejudice may be transferred from teacher to pupil!

The teacher must learn how to play modern piano music if he expects to teach it. He must understand the very oldest styles of music and how they grew and developed into modern music through the centuries.

WHEN TO INTRODUCE MODERN MUSIC.

Modern music should be introduced as soon as the pupil is capable of playing successfully the very simplest of these modern compositions. These simple pieces will not be very modern. The pupil rarely objects to any "strange sounds", or anything else, in these elementary, mildly modern compositions. As the student progresses, the quality of these pieces will grow more modern, but because of his previous experience the pupil will easily assimilate them. Just as seldom as there are objections to this music, just so frequently are the pupils really delighted. The introduction of modern music very often spells a new era of interest and progress for the pupil.

The classics need not be neglected. Teach them and the new music side by side, taking care that no prejudice is formed against either one. The danger, however, is certainly not in the neglect of the classics, but of the moderns. An examination of the programs of many student concerts makes one believe that music began and ended before the twentieth century!

If the introduction of modern music is delayed until the pupil is very advanced, the pupil may then be found to be unable to cope with its complexities; and he may already be found to possess, because of this delay, many prejudices which could have been avoided by introducing modern music sooner.

This is one of the problems that confront the teacher who is suddenly entrusted with the instruction of an advanced pupil who has had no experience whatsoever with modern music. The best policy to employ would be to introduce, first of all, less difficult modern music of a mild nature. Then, after certain explanations, more difficult modern music may be attempted. Where there are strong prejudices against modern music, the teacher will have to exercise a great deal of tact and wisdom to win the pupil over to the pleasures of this style of music.

In conclusion, we repeat, introduce modern music as soon as possible. These modern compositions will appeal to the children of today, and, if they are explained clearly and correctly and performed for the pupils satisfactorily, will furnish them a greatly increased musical horizon. The modern youth should, and experience has proved he most often does, derive distinct pleasure from the newness in melody, harmony, rhythm, and form possessed by this new music, that we have termed "modern".

RÉSUMÉ. Explanation of the Catalogue.

This part of the book has concerned itself entirely with modern music because, in the first place, this music has been entirely too obscure; in the second place, because education has in the past failed to equip the teacher properly for this particular phase of

music teaching; and, thirdly, because explanations about modern music have been wrong or cloudy and too few.

If the teacher but follows any one or two of the catalogues of the larger publishing houses, he will find a great many of the classics mentioned. The very best and most popular selections of the past are sure to be listed. But this will not be true of modern music unless the teacher has secured certain European catalogues, or is in close contact with the agents of the greater European houses.

This catalogue has the following things to offer:

1. A careful pre-selection of compositions from a field that has already grown very large.

2. Complete information necessary to secure any of these pieces—names of compositions, composers and publishers.

3. A separation of the compositions into groups in order to give at least some idea as to the difficulty of the compositions. Group one includes the least difficult; group two the moderately difficult; and group three the difficult ones. Group four contains a few two-piano selections. No attempt has been made to divide the compositions into the customary grades.

4. The lengths of most of the compositions. According to those handling the retail trade, teachers seem anxious to avoid lengthy compositions, especially in the earlier grades. Therefore, wherever pos-

sible, a shorter composition has been selected rather than a longer one, especially in groups one and two.

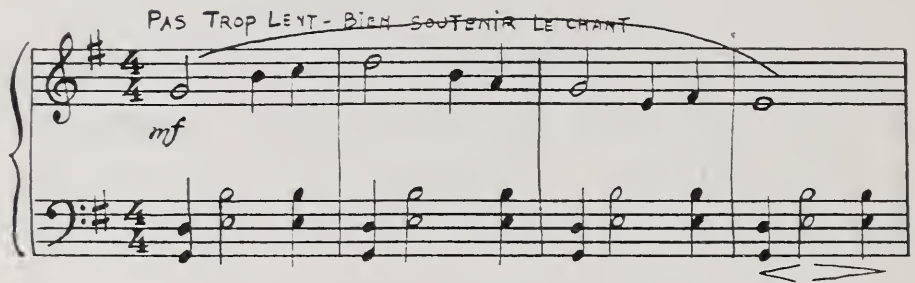
5. Excerpts from the first two groups, probably the most important parts of the catalogue. The compositions in groups three and four are, generally, too long for treatment in this manner.

Only one composition in a set is mentioned. The teacher owes it to himself to investigate the others. The excerpts are necessarily limited, but this does not mean that there are no other points of interest in these compositions.

THE CATALOGUE

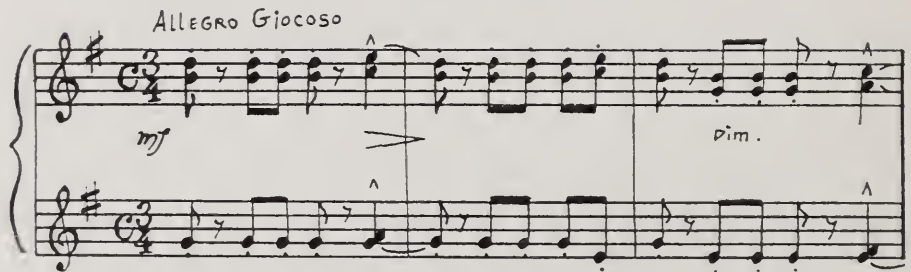
GROUP I

1. Arbeau, Pierre—Bercement (2 p.)—Durand.



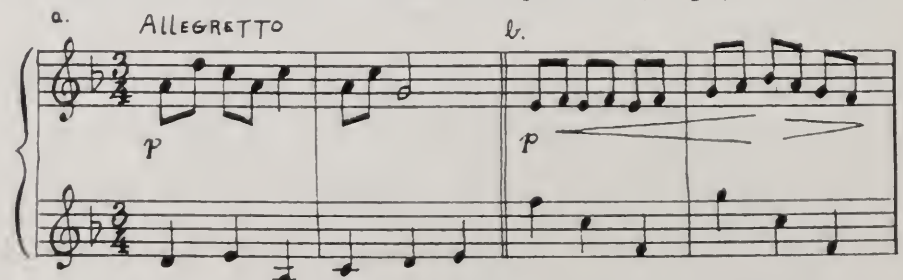
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2. Bloch, Ernest—Joyous March (3 p.)—Carl Fischer.
This selection is from "Enfantines."



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3. Demierre, Francois—Little Shepherd (2 p.)—Senart.



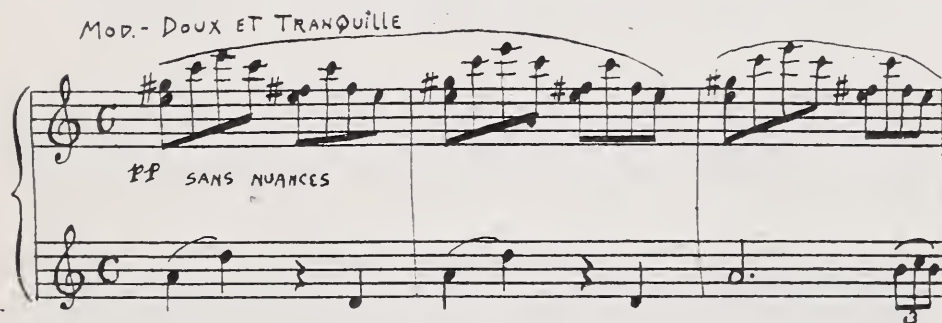
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4. Déré, Jean—The Snow Falls (2 p.)—Senart.



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5. Dieudonné, A.—Softly Flowing Stream (1 p.)—Senart.



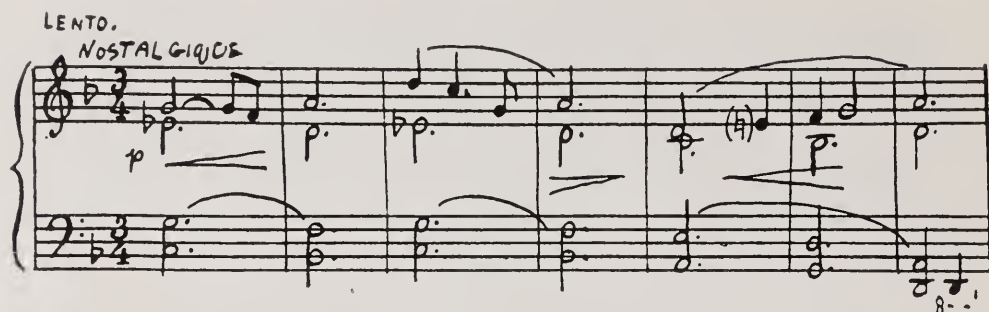
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6. Dieudonné, A.—The Birdcage (1 p.)—Senart.



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7. Fairchild, Blair—Le petit nègre est triste (1 p.)—Durand.
This is from "Pour les petits."



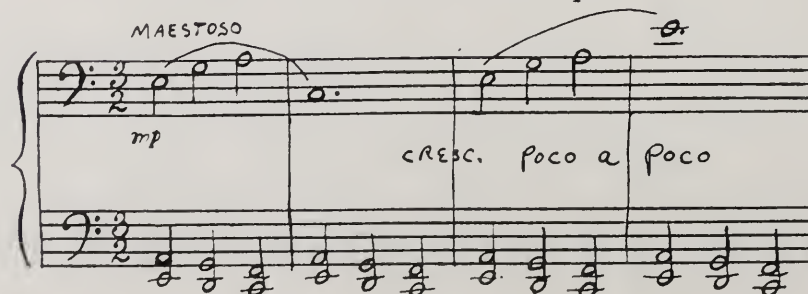
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8. Felumb, Svend. Chr.—Dans la forêt vers minuit (3 p.)—
Durand.
This is from "Six petites pièces."



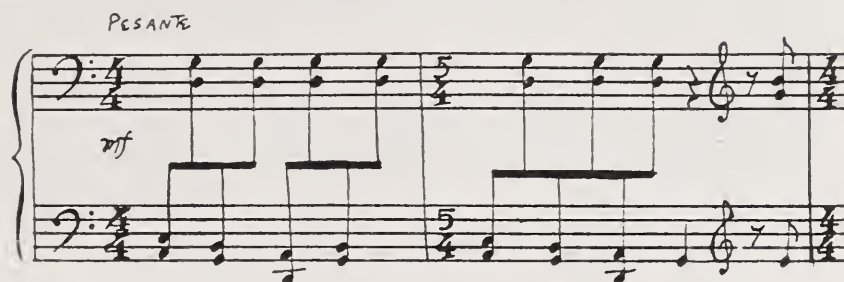
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9. Freed, Isadore—The Giant's Castle (1 p.)—Deiss.
This is from "Une Fête Fantasque."



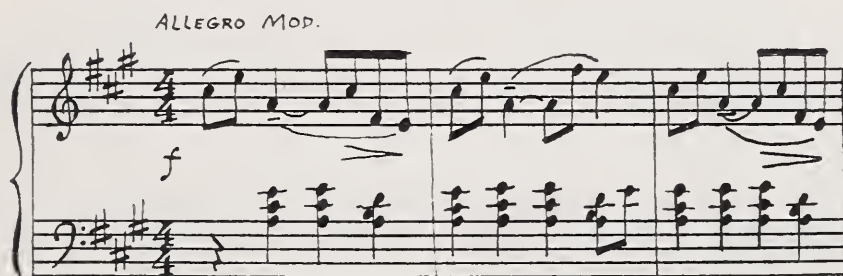
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10. Gretchaninoff, A.—Danse Des Oursons (2 p.)—Leduc.
This is from "Promenade Au Bois."



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11. Gretchaninoff, A.—Sur la prairie verte (1 p.)—Leduc.
This is from "Historiettes."



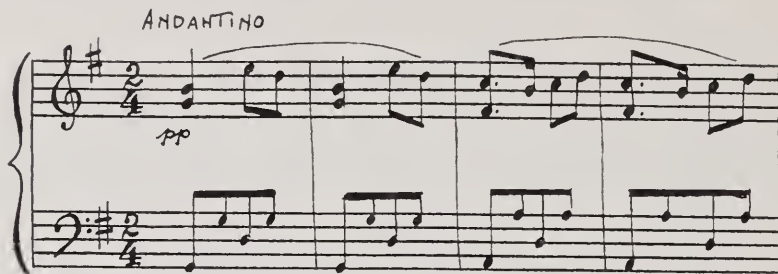
Copyright by Alphonse Leduc & Co., 1930

12. Haas, Joseph—Allegro Ritmico (1 p.)—Schott.
(Included in the New Piano Book, Vol. 3.)



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13. Mériqot, F.—Pour ma Poupée (2 p.)—Durand.

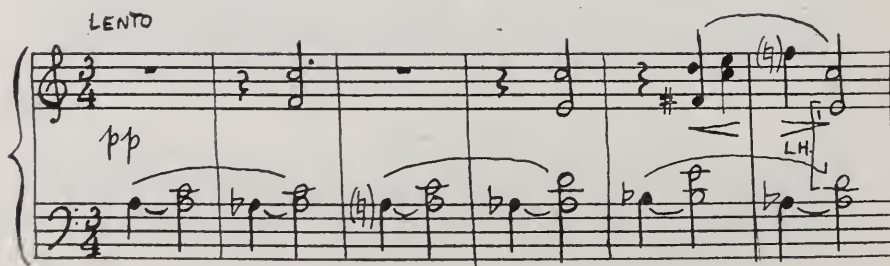


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14. Petyrek, Felix—Salzburg Village Feast (1 p.)—Universal.
(Included in Musik der Zeit, Vol. 5.)

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15. Potamkin, Frank J.—Prelude (2 p.)—Elkan-Vogel.



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16. Rabey, Rene—Gentil Berger (2 p.)—Durand.



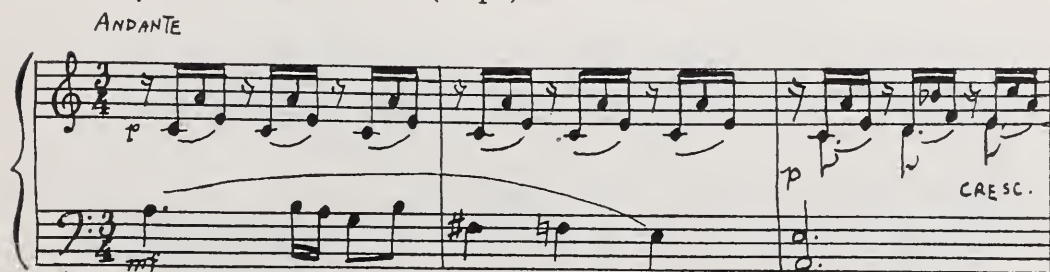
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17. Rabey, Rene—Petite Marquise (3 p.)—Durand.



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18. Sohy, Ch.—It Rains (2 p.)—Senart.



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19. Strimer, J.—Danse de la Mouche (2 p.)—Rouart, Lerolle.
This is from "Album de Natacha."



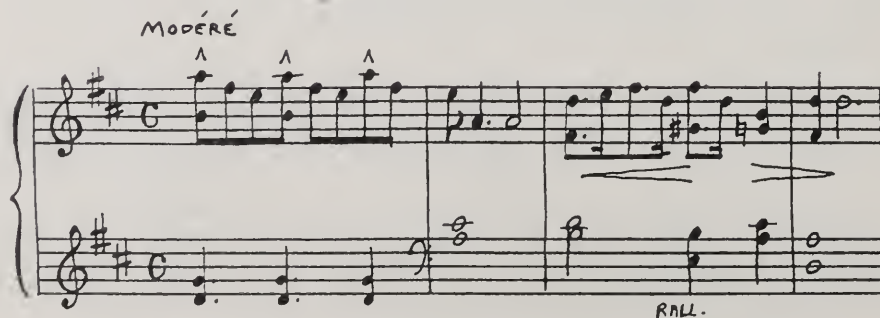
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20. Strimer, J.—Ronde Nocturne (2 p.)—Rouart, Lerolle.
This is from "In the Woods."



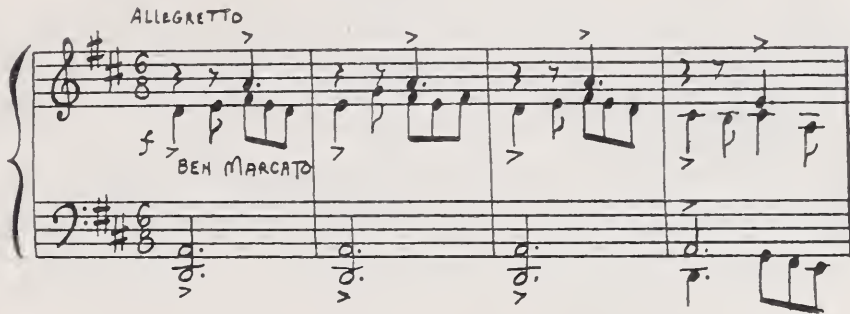
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21. Tansman, Alex.—Le petit Nègre (1 p.)—Eschig.
This is from "Pour les Enfants," easy group.



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22. Tremier, Jean—La Saint Jean (Ronde) (2 p.)—Durand.
This is from "Les Petits Artistes."



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23. Vellones, Pierre—Le Léopard vert (2 p.)—Durand.
This is from "Au Jardin des Bêtes Sauvages."



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24. Windsperger, Lothar—Kleine Elegie (1 p.)—Schott.
This is from "Kleine Klavierstücke," Op. 37.



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25. Woollett, H.—The Hunt (2 p.)—Senart.



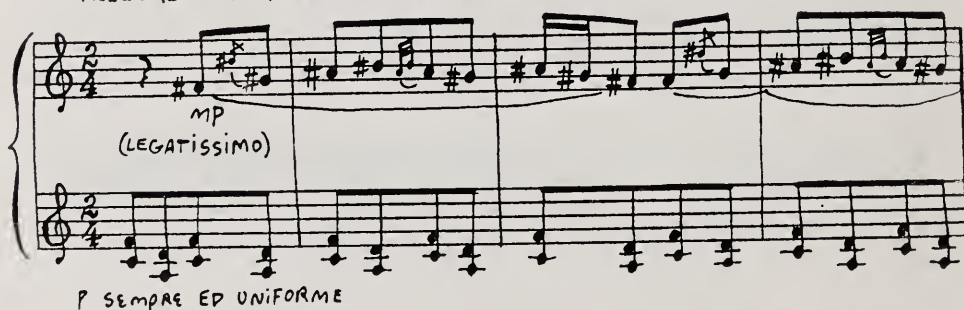
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GROUP II

26. Casella, A.—Preludio (2 p.)—Universal.

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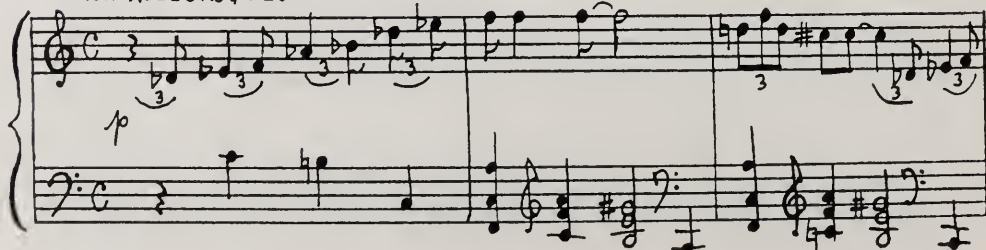


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27. Copland, A.—Sentimental Melody (2 p.)—Schott.

(Contained in the New Piano Book, Vol. III.)

NON ALLEGRO, LEGATO



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28. Delvincourt, Cl.—Nègre en Chemise (3 p.)—Leduc.
This is from "Croquembouches."

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29. Harsanyi, Tibor—Blues (4 p.)—Leduc.

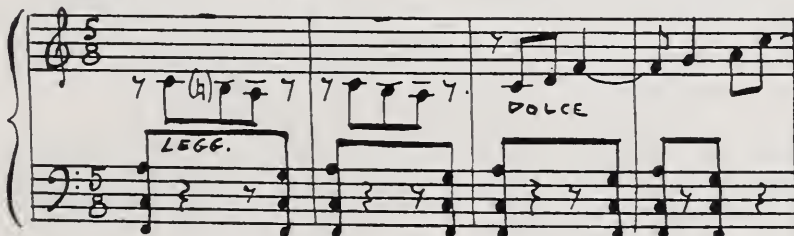
Tempo di Blues



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30. Harsanyi, Tibor—Rythmes (#2—1 p.)—Deiss.

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31. Ingelbrecht, D. E.—*Sur le Pont d'Avignon* (2 p.)—Leduc.
This is from "La Nursery," 3rd Book.



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32. Koutzen, Boris—*Enigma* (2 p.)—Elkan-Vogel.



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33. MacDonald, Harl—*Nocturne* (1 p.)—Elkan-Vogel.
This is from "Two Miniatures."



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34. Marescotti, A. F.—Prélude (6 p.)—Jobert.
This is from "Suite en Sol."



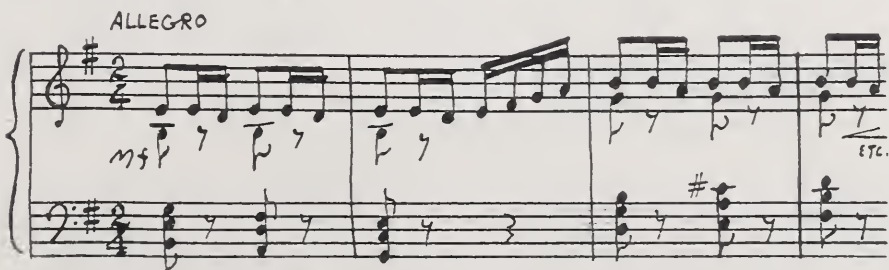
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35. Milhaud, Darius—Quatre Romances sans Paroles—Deiss.
The excerpt is from the first romance (1 p.).



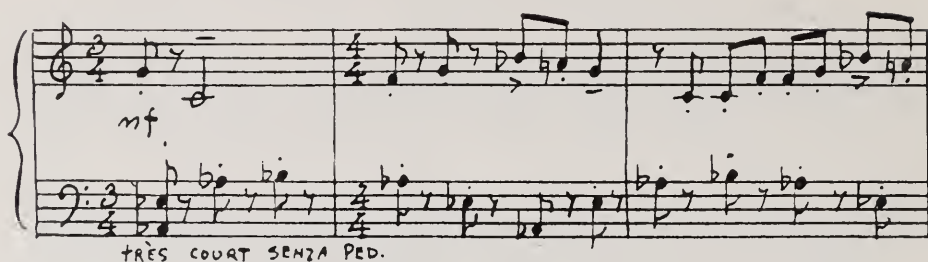
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36. Moy, Edgar—Caprice (3 p.)—Schott.



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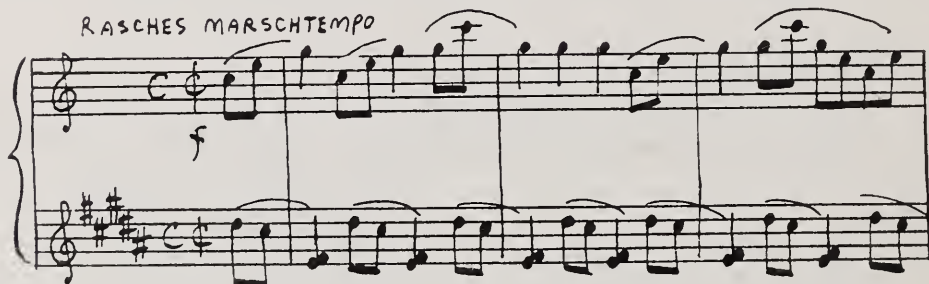
37. Neugeboren, H.—Capriccio (3 p.)—Deiss.
This is from "Cinq Pièces Brèves."



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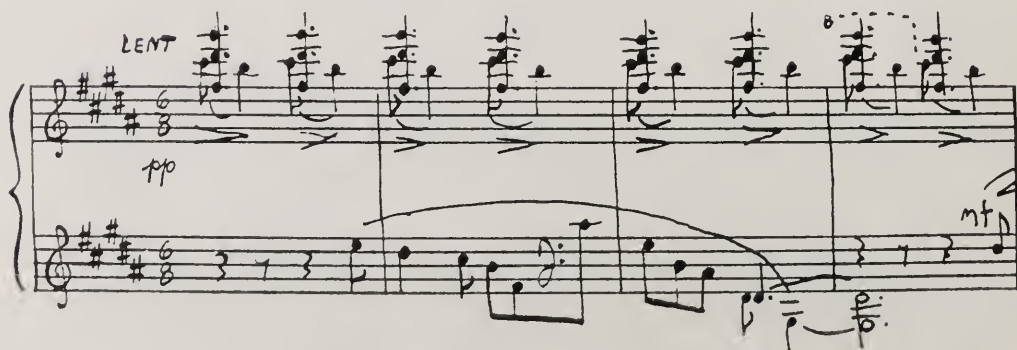
38. Petyrek, Felix—March of the Tin Soldiers (1 p.)—Universal.

This is from "Eleven Kleine Kinderstücke."



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39. Plé, Simone—Matin Clair (2 p.)—Salabert.
This is from "Dix Préludes."



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40. Potamkin, Frank J.—Etude (4 p.)—Elkan-Vogel.

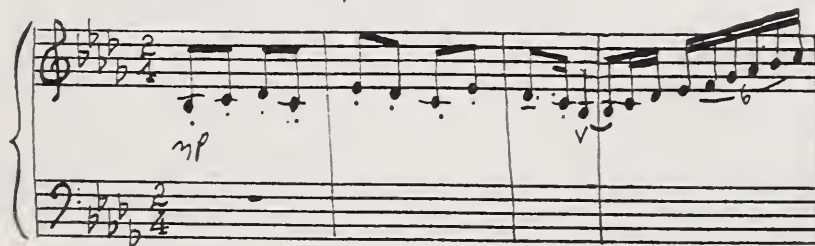
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41. Potamkin, Frank J.—Dance (2 p.)—Elkan-Vogel.

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42. Ravel, M.—Pièce en Forme de Habanera (3 p.)—Leduc.

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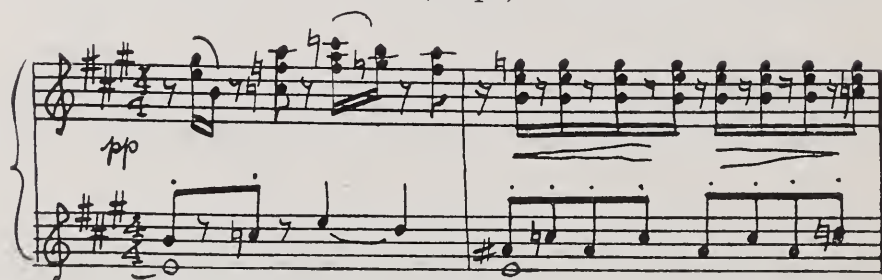
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43. Rhené-Baton—Pastorale (6 p.)—Durand.
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44. Roger-Ducasse—Prélude (2 p.)—Durand.



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45. Schmitt, Fl.—Somnolence (3 p.)—Leduc.
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47. Scott, Cyril—Little Dancer from Spain (3 p.)—Schott.



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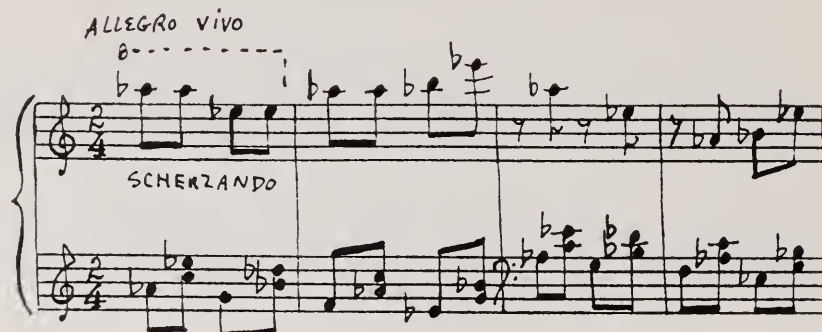
48. Toch, Ernst—Über dem Marktplatz (2 p.)—Schott.

This is from "Kleinstadtbilder," Op. 49.



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49. Turina, J.—*Carneval des Enfants* (3 p.)—Rouart, Lerolle.
This is from “Ninerias,” of which there are two series.



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50. Turina, J.—*Cloches* (2 p.)—Rouart, Lerolle.
This is from “Jardins d’Enfants.”



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GROUP III

51. Bartók, Bela—*Bear-Dance* (5 p.)—Boston.
52. Cator, Th. Vincent—*The Aura-Modal Scale*—Birchard.
This book contains a text, and ten pieces.
53. Chasins, Abram—*Procession*, Op. 4, #3 (6 p.)—J. Fischer.
54. Debussy, Cl.—*Cortège* (6 p.)—Durand.
This is from “*Petite Suite*.” (Most of Debussy’s pieces are too well-known to need mention here.)
55. Delannoy, M. de—*Triste* (2 p.)—Jobert.
This is from “*Quatre Mouvements*.”

56. De Severac, D.—Où l'on entend une vieille boîte à musique
(2 p.)—Rouart, Lerolle.
This is from "En Vacances."
57. Dupont, Jacques—Trois pièces—Leduc.
58. Dukas, Paul—Prélude Élégiacque (3 p.)—Durand.
59. Delage, Maurice—Rêves (7 p.)—Durand.
This is from "Contrerimes."
60. Delvincourt, Cl.—Danse Hollandaise (6 p.)—Leduc.
This is from "Cinq pièces Pour le Piano."
61. Delvincourt, Cl.—Nello (5 p.)—Leduc.
This is from "Boccacerie."
62. Durey, L.—Nocturne (4 p.)—Chester.
63. Ericourt, D.—Mechanic (4 p.)—Leduc.
64. Fleming, Chr. Le—Nocturne (5 p.)—Chester.
65. Fraser, Norman—Chandolin (Romantic Prelude & Fugue)
(6 p.)—Chester.
66. Freed, I.—Sonorités Rythmiques (six pieces)—Deiss.
67. Godowsky, L.—Waltz Poem No. 1. (7 p.)—Carl Fischer.
68. Godowsky, L.—Wayang-Purwa (5 p.)—Carl Fischer.
This is from the "Java Suite."
69. Granados, E.—Deux Danses Caracteristiques (8, 7 p.)—
Salabert.
70. Griffes, Charles T.—Lake at Evening (3 p.)—Schirmer.
71. Harsanyi, T.—Bagatelles (5 pieces)—Leduc.
72. Harsanyi, T.—Suite Brève (5 pieces)—Deiss.
73. Harsanyi, T.—Prélude (2 p.)—Deiss.
This is from "Douze Petites Pièces."
74. Ibert, J.—Escalaes (4 p.)—Leduc.

75. Ibert, J.—Le petit âne blanc (4 p.)—Leduc.
This is from "Historiettes."
76. Infante, M.—Gitanerias (12 p.)—Salabert.
77. Ingelbrecht, D. E.—Am-Stram-Gram (2 p.)—Salabert.
This is from "La Nursery," Book One.
78. Juon, Paul—Scherzo (5 p.)—Boston.
79. Laparra, Raoul—Cubana (4 p.)—Salabert.
This is from "paseos," five Spanish dances.
80. Migot, Georges—Trois Nocturnes Dantesques—Leduc.
81. Migot, Georges—Le Sagittaire (11 p.)—Leduc.
This is from the "Zodiac."
82. Milhaud, Darius—Lent (3 p.)—Durand.
This is from "Suite pour le piano."
83. Neugeboren, H.—Six Préludes—Deiss.
84. Paray, Paul—Fervent (2 p.)—Jobert.
This is from "d'une ame."
85. Passani, Emile—le joli jeu (13 p.)—Jobert.
86. Pittalugos-Gustavo—Six Danses Espagnole en Suite—Leduc.
87. Poulenc, Fr.—Presto in B flat (4 p.)—Deiss.
88. Poulenc, Fr.—Novellette # 1 (4 p.)—Chester.
89. Ravel, Maurice—Danse de Daphnis (4 p.)—Durand.
(It is hardly deemed necessary to mention here Ravel's well-known piano pieces.)
90. Schmitt, Fl.—Soirs—Durand.
91. Schönberg, Arnold—Seches Kleine Klavierstücke, Op. 19—Universal.
(There is an analysis of these pieces in "Modern Music," Vol. V. #4, by Hugo Leichtentrett, in an article, "Schönberg and Tonality.")
92. Staelberg, R.—Suite Francais—Leduc.

93. Swinstead, Felix—Oh Dear! What Can the Matter Be (5 p.)—Chester.
94. Tansman, Alex.—Berceuse (1 p.)—Eschig.
(Contained in the New Piano Book, Vol. III.)
95. White, Paul—Five Miniatures—Elkan-Vogel.

GROUP IV

Sauverezis, A.—Dialogues—Leduc.

This is a set of "Neuf Pièces Faciles" for two pianos, four hands. They are mildly modern. The problems are distributed very equally between the two parts. The names follow:

1. Accord parfait. (4 p.)
2. Amicalement. (5 p.)
3. En marchant vers l'Espagne. (7 p.)
4. Naïf carillon. (6 p.)
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